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ABSTRACT

A study of loan availability in Michigan through the federal Guaranteed Student Loan Program outlines the evolution of federal lending programs for college students and describes program characteristics, funds, costs, defaults, and funding systems. The situation for borrowers and lenders in the state and its regions is examined, including statistics on lending and default rates. Rates of borrowing at individual Michigan institutions are given for 1971 through 1975, with default rates. The effect of eight variables (such as other student aid availability, number of applicants, and other factors) on borrowing from private lenders is analyzed. A chapter addresses the issue of the school as a lender of last resort. Policy considerations taken as a result of the study include the economics and risks of becoming a lender and policies on default risk. Appended are lists of the regions and institutions in the study; a comparison of bank and applicant estimates of borrowing rates, by region; definitions of variables and data sources; statistical analyses of variables on borrowing rates at community colleges and public and private four-year institutions; and a bibliography. (MSE)

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The Guaranteed Student Loan Program

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DIVISION OF RESEARCH

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

MICHIGAN BUSINESS
REPORTS Number 63

The Guaranteed Student Loan Program

Access to Loans in Michigan 1971-72 to 1974-75

CYNTHIA SAHAGIAN CROSS

A publication of the
Division of Research
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PREFACE

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else.

*John Maynard Keynes**

Acceptance of the notion that expenditures on postsecondary education constitute investments which individual students may appropriately finance by borrowing money has had, and will continue to have, far-reaching effects on the entire structure of higher education in the United States. Universities and colleges are even now only beginning to grasp the implications of the resulting change in funding patterns for their budgets and programs.

The Guaranteed Student Loan Program is a central element in this revolutionary change in financing. Because it is the largest loan source, the only open-ended loan program, and the one supposedly aimed at the middle-income student, its success or failure is critical to the new mode of financing higher education. This monograph deals with only one limited aspect of that program—albeit a critical one—namely, whether the reliance on private financial institutions will provide adequate, nondiscriminatory access to Guaranteed Loans. Many other issues must also be considered before the books are finally balanced on this ambitious scheme. In the future this writer hopes to explore some of the other questions as well.

*John Maynard Keynes, *The General Theory of Employment, Interest, and Money*, New York: Harcourt, Brace & Co., 1958, p. 383.

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The dissertation on which this study is based could not have been written without the cooperation of the Office of Student Financial Assistance Services of the Michigan Department of Education. I am particularly indebted to Ronald Jursa, Director of the Office, and Patrick Cummings, Supervisor of the Guaranteed Loan Program, for their interest in the study and their willingness to help me secure needed data.

Charles Buckborough of the Michigan Department of Education programed special computer runs needed to obtain the basic material for Chapter V and the 1971–72 data on individual lenders used in Chapter III. Robert Holmes graciously made available the institutional data from the *Michigan Undergraduate Financial Aid Survey* used in Chapter IV. Thomas A. Butts, Director of Financial Aid at the University of Michigan, offered helpful suggestions and advice in initiating this study. None of these gentlemen should be held responsible for the analyses or conclusions contained herein.

The members of my dissertation committee were Professors Joseph P. Cosand (Chairman), Harvey E. Brazer, Gerald Gurin, and James L. Miller, Jr. In his own way each has been most helpful. This report certainly is much improved as a consequence of their advice.

I

THE EVOLUTION OF FEDERAL LENDING PROGRAMS FOR COLLEGE STUDENTS

Students at American colleges and universities are subsidized in four major ways:

1. By subvention of tuition charges for all students either through government appropriations or private gifts
2. By direct grants or scholarships to individual students
3. Through opportunities for subsidized employment, as in the federal Work-Study Program[1]
4. By loans which are arranged outside normal credit channels at interest rates below the market rate and under which repayment can be deferred until the student has entered the labor force

This study examines one aspect of the Guaranteed Student Loan Program (GSLP), the largest student loan program operating in the United States today—namely, student access to loans from private lenders under the program. In studying the GSLP it is important to recognize that it is a part of a larger whole and that one program need not in and of itself fulfill all the criteria for an ideal comprehensive student aid scheme. In addition, since this study examines only one aspect of the operation, it provides only a part of the information needed for a comprehensive evaluation of the GSLP.

Initially I undertook this study to discover how well the existing program was meeting the needs of its target population within the state of Michigan. Later, when the state of Michigan committed itself to a Direct Lending Program, it became appropriate to ask what might be the characteristics of that part of the

pool of eligible borrowers who would need a lender of last resort. More recently, since Congress has redefined its goals for the operation of the Guaranteed Loan Program in the Higher Education Amendments of 1976, some of the findings of this study would appear to cast doubt on the attainability of those objectives.

History of Federal Programs for Student Loans

Although the federal government maintained a program during World War II, its permanent commitment to participation in loan programs for college students dates from the National Defense Education Act of 1958. Under Title II of that act federal funds were authorized to set up college and university based revolving loan funds on a 9-to-1 federal-school matching basis. The federal government was even willing to lend schools their shares where necessary. Although the Nixon, Ford, and Carter administrations have wanted to discontinue infusions of new government funds, congressional support for the program (now renamed National Direct Student Loan Program) has ensured continued appropriations of capital each year.[2]

In 1965 the Higher Education Act authorized a second major federal venture into student loans—the Guaranteed Student Loan Program (GSLP). This program differs from the NDSL program in several respects, the most fundamental of which is that under GSLP the federal government does not directly provide funds for loans but rather guarantees loans made by others, principally lenders from the private capital market. Although the original legislative proposal called for a single national loan insurance program, Congress eventually authorized a dual scheme under which the federal government acts either as an original insurer (the Federal Insured Student Loan Program, commonly known as FISL or FISLP) or as a reinsurer of loans guaranteed by state or private nonprofit agencies (the Guarantee Agency Program). Table 1 compares the principal features of the NDSL and GSL programs as of the academic year 1974–75.[3]

It would be hard to overestimate the impact of these two loan programs on the student financial aid picture in the United States. A 1958 study by Shirley Radcliffe for the Office of Education showed that as of 1956 only 767 institutions out of 1,471 surveyed had long-term student loan programs. In 1956 those programs lent 83,000 students $13,448,000, an average of $182 each. By comparison, in 1960, the second year of the National

Table 1

CHARACTERISTICS OF THE NATIONAL DIRECT STUDENT LOAN AND GUARANTEED STUDENT LOAN PROGRAMS*

Guaranteed Student Loan Program	*National Direct Student Loan Program*
Source of Funds:	
Private lenders, principally third parties, but also educational institutions directly.	Capital funds allocated to schools from congressional appropriations and matched 9 to 1 by the institution. Repaid loans and interest remain in the separate institutional revolving funds.
Charges:	
Students pay 7%; federal government pays interest while eligible borrowers are in school, and pays "Supplemental Allowance" of up to 3% on all outstanding loans. Also an insurance premium of .25% in FISL, up to .50% in states.	Borrowers pay 3% after graduation; no interest charge while in school.
Forgiveness Features:	
None.	Up to 100% cancellation for certain occupations and/or services.
Loan Limits:	
Federal program: $2,500 per year to maximum of $7,500 for undergraduates, $10,000 for graduates. State limits are frequently lower.	$2,500 first two years, $5,000 total as undergraduate, $10,000 including graduate study.
Institutional Eligibility:	
Includes vocational and proprietary schools	Originally colleges and universities, has included vocational and proprietary schools since 1968.

*As of academic year 1974–75.

Defense Student Loan operations, 115,450 NDSL loans were made which totaled $50,151,908, or an average of $438.[4] When the National Task Force on Student Aid Problems (Keppel Commission) estimated student aid funds available from all sources for the 1974–75 academic year, it found that federally sponsored loan funds make up over 28 percent of financial aid to students. Table 2 presents the commission's estimates.

Table 2

ESTIMATED AVAILABLE STUDENT AID FUNDS,* ACADEMIC YEAR 1974–75

Program	Amount (Millions of Dollars)	
Federal:		
National Direct Student Loans (Appropriations)	$ 292	
National Direct Student Loans (Collections)	170	
Guaranteed Student Loans (New Loans)	1,300	
Loan programs		$1,762
Basic Educational Opportunity Grants	475	
Supplemental Education Opportunity Grants	210	
College Work-Study employment	270	
Nursing loans and grants	45	
Law Enforcement Education Program (grants and loans)	40	
Bureau of Indian Affairs	23	
State Scholarship Incentive grants	19	
Grant and employment programs		1,082
Social Security benefits	527	
Veterans benefits	1,570	
Benefits		2,097
Subtotal—all federal		4,941
State and Institutional:		
State scholarship and grant programs	429	
Institutional scholarship and grant programs	450	
Institutional employment programs	280	
Institutional loans	30	
Other private sources	50	
State and Private Sources		1,239
Total student aid—All sources		$6,180

*Excludes graduate students in the health professions.

Note: There appear to be slight differences between these figures and other data for federal programs. They are presented only to illustrate the relative dimensions of various aid programs.

Source: National Task Force on Student Aid Problems, *Final Report* (no place of publication given, 1975), p. 11.

This growth in federal loan programs has not taken place in the absence of controversy and sharp debate. Americans have long regarded education as a desirable good, which benefits both the student and society. In the late sixties, however, attention turned from the social benefits of education to the private benefits

received by the individual student. A new philosophy of aid to higher education arose which argued that aid to specific institutions of postsecondary education aided students regardless of need and that aid to individual students was a more efficient way of using limited funds. This philosophy favored aid to individual students on the basis of economic need alone. It held that the student should be able to use the aid at a wide variety of postsecondary institutions and that the aid should belong to the student rather than to the school he or she attended.[5]

The adoption of a student-centered aid program in the Higher Education Amendments of 1972 may have marked a major turning point in the history of the institutional structure of higher education in the United States.[6] The debate on the merits of the issues continues unabated, however, and its outcome will probably not be certain for another decade. Inevitably almost any aspect of financing postsecondary education becomes entangled in this debate. In particular, programs which permit students to pay more of the cost of education themselves, such as the Guaranteed Student Loan Program, are apt to be viewed unfavorably by those who prefer "free" education, those who prefer that aid be channeled through institutions rather than directly to students, or those who prefer to subsidize needy students with grants rather than loans.

Default record

The GSLP and NDSL programs have come under attack on far more concrete grounds, however, as Congress and the General Accounting Office have reviewed their operations. The problem receiving the greatest publicity has been the default experience of the two programs. In addition program costs and accessibility have received varying amounts of public attention.

Students borrowing under either FISLP or the Guarantee Agency part of the Guaranteed Student Loan Program pay a fee which is supposed to cover the cost of insuring against defaults. Such defaults may arise from the death or disability of the borrower, from an adjudicated bankruptcy, or from delinquency (i.e., simple nonpayment). Since students are not expected to make payments against principal while attending school, Guaranteed Loans typically enter repayment status several years after the loan is made. Thus GSLP was able to grow rapidly for some time before it became evident that many loans made in earlier years were being

defaulted and that the cost of payments to lenders would greatly exceed the contributions to the insurance fund.

As of September 30, 1976, the FISL program of direct insurance had paid $287 million on defaulted loans, and the reinsurance program had paid $221 million to state guarantee agencies. For the fiscal year 1976–77 default payments of $103.7 million were projected for the FISL program and $64.5 million for the guarantee agency program.[7] It was the need to make supplemental appropriations to cover these payments which drew national attention to the default problem.

In the case of the National Direct Student Loan Program, because revolving funds were located at individual colleges and universities, the failure of earlier borrowers to repay NDSL loans simply decreased the amount available for new loans. There was nothing in the structure of the program which would call the attention of Congress to the actual repayment record of borrowers in that program. It was not until May 1974 that a congressional committee obtained any data on defaults under NDSL which were comparable to those available for the Guaranteed Loan Program.[8] There is, in fact, at least some reason to believe that Congress would not have paid much attention to NDSL defaults even if it had been aware of the precise figures all along. Theoretically the Guaranteed Loan Program is aimed at the middle-class students who can pay their own way if the payments are stretched out a bit. NDSL, on the other hand, is supposed to aid students classified as needy. John F. Morse, who was both an observer of and participant in the development of the federal lending programs, recently described the terms of the NDSL program as being "as liberal as the Senate could sell and the House would buy" in 1958.[9] As for repayment, he comments:

> In short, it seems apparent that at the outset the authors of the National Defense Education Act (NDEA) were not overly concerned with repayment; their concern was to get the money out there.[10]

There are three classes of participants in the NDSL program: the students, the schools, and the federal government. The Guaranteed Student Loan Program includes these three and adds a fourth—the private commercial lenders, a class whose primary obligations are not to students or schools but rather to stockholders and depositors. They are not in a position to ignore delinquencies by student borrowers. Their participation in the GSL Program assured that defaults in excess of the amount covered by the insurance premiums would quickly lead to requests for supplemental appropriations from Congress.

If the participation of commercial lenders increased the likelihood that defaults would be quickly revealed, the open-ended character of the Guarantee Program increased the federal exposure to risk of loss. The federal commitment under NDSL is limited to fixed capital contributions subject to annual congressional appropriation. These loan funds are then allocated to various postsecondary educational institutions in an elaborate process in which individual institutional applications are screened. The Guaranteed Student Loan Program has always been well below its theoretical ceiling on annual lending, and has no device for rationing loan guarantees among schools. Until some modest limits were imposed in the Higher Education Amendments of 1976[11] eligible students at any school could borrow at will, provided they could find a lender. If a college, university, or proprietary vocational school could arrange a line of credit with a participating bank, or become a lender itself, there were no effective limits on the number of loans made to a school's students.

At the national level there have been belated attempts to protect students against fraudulent sales pitches and to ensure that persons borrowing money are bona fide students.[12] Such elementary administrative precautions should reduce the default rate, but it remains to be seen by how much it will fall. It is easy to attribute the high default rates in the FISL program to sloppy management and a willingness to lend to the riskiest classes of students, but the State Guarantee Agencies have also experienced rising default rates despite closer supervision and more restrictive lending practices.[13]

Rates, characteristics, and relative costs of GSLP defaults

There are great difficulties with the basic data used to compute the loan program default rates; however, one careful study estimated that as of 1974 the FISL program had a cumulative default rate of 15.4 percent, based on the total amount lent under the program, that the Guarantee Agency rate was 8.5 percent, and the programs' combined rate was 11.2 percent.[14] These rates are not exaggerated, and it appears that they have, if anything, risen since 1974.

Of equal interest are the default rates by type of school attended and by personal characteristics of the borrower. In the study of default rates mentioned above, Hauptman[15] estimated

1974 default rates by types of school and of guarantee source as follows: for FISL, 8.5 percent at colleges and universities, and 25.0 percent at junior colleges and institutes and at specialized and vocational schools; for Guarantee Agencies, 7.1 percent at colleges and universities, 13.1 percent at junior colleges and institutes, and 15.2 percent at specialized and vocational schools.

Considering the limited data on default rates according to personal characteristics of borrowers, Hauptman concluded:

1. Defaults are more probable for borrowers with low family income. (It should be noted that no separate category exists for independent students, so that many independent students are included in the low-family-income category.)
2. Neither sex nor marital status appears to be important in predicting default.
3. The probability of black students' defaulting is greater than that of white students.
4. Defaults are highly correlated with type and control of educational institution attended, with proprietary ownership and specialized vocational types showing disproportionate default activity.[16]

Although each of these findings is verifiable Hauptman warned:

> Looking at borrower characteristics one at a time can be misleading. If several characteristics are highly correlated, the apparent relationships may be spurious. For example, it appears that black students have a much higher tendency toward default than white students. But some of this difference surely results from the lower family incomes of blacks.[17]

Other costs of GSLP

While the bills for defaulting student borrowers have aroused congressional ire, the GSLP's interest subsidies and Special Allowance are proving equally costly. For the twelve months of fiscal year 1976 interest subsidies for eligible students in school or in a grace period or deferral cost $200.6 million; the Special Allowance, which is paid on the principal balance of all outstanding loans, cost $77.9 million.[18] The interest subsidies were a part of the original program, designed to allow needy students to omit any payments while they are in school, a provision similar to that of the NDSL Program. The Special Allowance, however, was an afterthought, an attempt to keep Guaranteed Loans attractive to lenders as interest rates rose to new highs in the late 1960s.

D. Bruce Johnstone recently estimated the expected cost of lending a student $100 for the usual 13-year term of a GSLP loan. His estimate of the present value of all costs was $41 per hundred lent. Of this total, $16.63 and $14.28 represented the costs of the interest subsidy and Special Allowance respectively, $8.19 the cost of defaults at an 11 percent rate, and $1.90 the administrative cost.[19] Johnstone's figures are all the more startling when seen in comparison with his estimate for the NDSL Program. Using similar assumptions about discount rates, and a cumulative default rate of 19 percent, he appraised the cost of NDSL lending at $53.72 in discounted net costs per $100 lent.[20] For a program which was supposed to be relatively cheap (and "off-budget") the Guaranteed Loan Program does not appear to live up to its billing, particularly when it is noticed that the lion's share of the GSLP's cost under Johnstone's estimating method lies in the uncontrollable part of the budget, rather than in the default claims which have received so much attention.

Sallie Mae

The latest arrival in the constellation of federal agencies concerned with general purpose student loans is Sallie Mae—the Student Loan Marketing Association. Sallie Mae does not lend to students, but rather lends to lenders. More recently, the agency buys loans from lenders so that, in theory at least, they can make more loans with the new infusion of capital.

Like its model, Fanny Mae, the Federal National Mortgage Association, Sallie Mae is an off-budget, for-profit, "private" corporation. As a quasi-governmental body SLMA can borrow through the Federal Financing Bank at rates only slightly above those paid by the Treasury. The collateral offered is the stock of Guaranteed Loans on hand. SLMA makes a profit on the spread between the cost of borrowing money and the rate paid on Guaranteed Loans (including the Special Allowance) minus administrative costs.

One important way of keeping down the administrative costs attached to the loans the program purchases is to avoid loans likely to default. Over and over again the representatives of Sallie Mae assert their interest in the "quality" of the paper they purchase.[21] It is an open question whether they will in fact be an effective force in bringing down the default rate. While Sallie Mae initially began dealing with banks, it has recently begun dealing in a large way with state direct lending agencies and educational

institutions.[22] Both classes of lender are usually either of the "open door" type or lenders of last resort to students turned down by private commercial firms, so it is reasonable to consider the possibility that they make riskier loans than commercial lenders.

Focus of This Study

One of the major studies of the federally sponsored college loan programs is Robert Hartman's *Credit for College*,[23] which was undertaken for the Carnegie Commission. Hartman examined existing data (for 1967–68) on the family income of borrowers and the amount borrowed by income class. From these data he estimated the economic value of the access to credit and the interest subsidy provided under the major loan programs. He then considered the distribution of these benefits by income class, compared with the family income distribution for all college students. Hartman's major conclusion was that, in general, the operation of the Guaranteed Loan Program up to that time did not serve to redistribute income in the sense of being heavily weighted in favor of poorer students.

The study reported here followed Hartman's example in considering data on actual borrowers under the program; unlike his study this one focuses not on the benefits but on access to those benefits. It asks, not whether poor students borrowed money, but whether poor students were able to borrow money if they wished to do so. In addition, variables other than family income are considered in order to see whether they affect access to credit under the Guaranteed Loan Program. Among them are race, sex, school attended, grade, default rate of institution attended, and region of residence. The data are from the state of Michigan for the years 1971–72 through 1974–75.

NOTES

1. Under the Work-Study Program the federal government pays approximately 80 percent of the cost of employing eligible students. The students in the program are assured of the opportunity to work for given periods of time, and the effective demand for all student labor is increased in a given market area.
2. See Anne C. Roark and Karen J. Winkler, "House Subcommittee Approves $3.6 Billion for Education," *Chronicle of Higher Education*, Mar. 7, 1977, p. 13.
3. There have also been programs for students in nursing and the health profes-

sions. They have been relatively small and operate in a manner similar to that of NDSL.

4. U.S., Office of Education, *The National Defense Student Loan Program: a Two-Year Report* (Washington, D.C.: Government Printing Office, 1961), pp. 10–12, 14.
5. For a good survey of the issues see the study by the Carnegie Commission on Higher Education, *Who Pays? Who Benefits? Who Should Pay?* (New York: McGraw-Hill, 1973).
6. See Clifton Conrad and Joseph Cosand, *The Implications of Federal Education Policy* (Washington, D.C.: ERIC Clearinghouse on Higher Education, 1976).
7. Source: Testimony of Kenneth A. Kohl, Associate Commissioner, Office of Guaranteed Student Loans, in U.S., Congress, House, Committee on Banking, Currency and Housing, *Loan Guarantees and Off-Budget Financing, Hearings*, before the Subcommittee on Economic Stabilization, 94th Cong., 2d sess., November 10, 1976, p. 63.
8. The NDSL rate of default was approximately 10.4 percent or 14.1 percent depending on the method of calculation. Source: Testimony of Dr. John D. Phillips, Acting Associate Commissioner of Education for Student Assistance, in U.S., Congress, House, Committee on Education and Labor, *Student Financial Assistance, Part 3: Student Loan Programs Hearings*, before the Special Subcommittee on Higher Education, 93d Cong., 2d sess., May 28–30, June 3, 1974, pp. 9–22.
9. John F. Morse, "How We Got Here from There—A Personal Reminiscence of the Early Days," in *Student Loans: Problems and Policy Alternatives*, ed. by Lois D. Rice (New York: College Entrance Examination Board, 1977), p. 4.
10. *Ibid.*, p. 5.
11. Schools which lend directly may not lend to more than 50 percent of their students, nor may state direct lending agencies lend to more than 75 percent of the students at any one school. See "New Rules for GSL Lenders Backed up by Criminal Penalties," *Higher Education Daily*, October 13, 1976, p. 3.
12. See "Proposed GSL Regs: The Lesson Learned from West Coast Schools," *Higher Education Daily*, November 9, 1976, p. 3.
13. See Arthur M. Hauptman, "Student Loan Defaults: Toward a Better Understanding of the Problem," in *Student Loans: Problems and Policy Alternatives*, ed. by Lois D. Rice (New York: College Entrance Examination Board, 1977), p. 135.
14. *Ibid.*
15. *Ibid.*, p. 144.
16. *Ibid.*, p. 142.
17. *Ibid.*, p. 144.
18. U.S., Department of Health, Education, and Welfare, Office of Education, Office of Guaranteed Student Loans, "Guaranteed Student Loan Program Monthly Report—December 1976" (Washington, D.C.), mimeo, p. 2.
19. D. Bruce Johnstone, "Federally Sponsored Student Loans: an Overview of Issues and Policy Alternatives," in Rice (ed.) *Student Loans: Problems and Policy Alternatives*, p. 38.
20. *Ibid.*, p. 36.
21. See Student Loan Marketing Association, *Annual Report, 1975* (Washington, D.C., 1976), pp. 12–13.
22. See Student Loan Marketing Association, *Annual Report, 1976* (Washington, D.C., 1977), pp. 3–4.
23. Robert W. Hartman, *Credit for College: Public Policy for Student Loans* (New York: McGraw-Hill, 1971), especially pp. 47–59.

II

NATURE AND PURPOSE OF THE STUDY

The essential difference between the National Direct Student Loan Program (NDSL) and the Guaranteed Student Loan Program (GSLP) is that the one is a closed-end revolving loan fund scheme whereas the other is an open-ended entitlement program offering a loan guarantee to all students who meet other criteria for eligibility. In practice, however, the absence of willing lenders has effectively limited the expansion of the GSLP. The enabling legislation authorizes a large number of possible lenders under the program. These fall into three functional classes: 1) educational institutions, 2) agencies established by state governments which lend directly to students, and 3) financial intermediaries from the profit-oriented private business sector. The participants in GSLP from this last class have been almost exclusively commercial banks, savings banks, savings and loan associations, and credit unions.[1] By far the largest number have been commercial banks.

The private commercial lending institutions differ from the other two classes of GSLP lenders in that they have no direct stake in student loans per se. Educational institutions, whether proprietary or nonprofit, have an obvious self-interest in assisting their students, and governmental direct lending agencies have student loans as their primary product. To private commercial lenders, however, student loans are merely one possible investment outlet among a large array. In this respect the private commercial lender is removed from the forces governing decision making in education and is instead subject to a very different constellation of influences. The presence of these private commercial lenders makes the GSLP a guarantee program rather than a direct loan program in disguise. This study tests some hypotheses

about the expected behavior of these private commercial lenders and examines the implications of the findings for loan guarantee programs as a form of student financial aid.

Access

If one considers schooling to be a form of investment activity yielding a stream of returns over a period of years, then borrowing money to finance an investment in education is a rational form of economic behavior. Those persons most likely to wish to invest in educating themselves are young men and women and are unlikely to command credit in private markets. Under a guarantee program the government substitutes its credit for the student's; this reduces the risk attached to such a loan and should allow a student to borrow on much more favorable terms.

As outlined in Chapter I, the Guaranteed Student Loan Program initially envisaged only the need for a guarantee of the loan's principal in order to secure access to private credit for students. The ceiling on interest charged to students was initially set at 6 percent. In 1968 that ceiling was raised to 7 percent. In 1969, as money markets continued to tighten, the federal government began supplementing the interest payments with a Special Allowance on the outstanding principal of all student loans. Until the ceiling was raised by the Higher Education Amendments of 1976, the rate on the Special Allowance varied from 0 to 3 percent and was set quarterly at the discretion of the Secretary of Health, Education, and Welfare.

There is ample evidence that these terms have not been sufficiently generous to induce private commercial lenders to offer enough student loans to meet overall national demand.[2] The price has been set below the market-clearing equilibrium and a shortage has developed. Given a large class of students, all equally eligible for the government guarantee, which ones will obtain credit from private lenders? How will these loans be rationed?

Expected behavior of commercial lenders

We begin with two assumptions: 1) that the firms under study have profit maximization as their corporate goal, and 2) that the firms' supply curves for student loans are upward sloping—i.e.,

the higher the expected net rate of return, the larger the number of loans a firm would wish to make (all other factors remaining constant). In the case of Guaranteed Loans calculation of the expected net rate of return would include interest payments, the Special Allowance, and administration costs adjusted for the risk of default with its attendant additional costs of collection efforts and lost interest.[3]

We expect, then, that the individual lending institution views its market in the following manner:

1. There is an array of possible lending opportunities, each with a net rate of return discounted for expected administration costs and expected losses from default.
2. The firm has a fixed supply of loanable funds. (Alternatively it has a given supply curve for deposits.)
3. Within each credit market there are potential GSLP borrowers who can be ordered as to the expected net rate of returns on such loans. The distinguishing characteristics of these potential borrowers are, first, the regular administrative and collection costs associated with their individual loans, and, second, the estimated risk that they will default on the loans.

Given such an ordered array we would expect lenders to extend credit to students up to the point where the expected net rate of return on the last loan offered is equal to the expected net rate of return on the last investment made in each of its other lines of business.

It is true that many monetary assets such as Treasury bills, listed securities, and the like are traded in national markets, but commercial banks, savings institutions, and credit unions exist to service local market areas. In states such as Michigan where branch banking is confined to local areas a bank's investment opportunities are significantly conditioned by the state of the local economy. In such cases it is reasonable to expect to find variations in the relative attractiveness of Guaranteed Student Loans and in the proportion of eligible would-be borrowers served. These proportions would be adjusted as lenders' experiences with student borrowers either confirmed or changed their expectations regarding administration costs and default rates. For all market areas we would expect that, if credit conditions became tighter nationally, fewer students would be able to borrow within each area. Those squeezed out would have characteristics associated with lower net rates of return, specifically higher expected collection costs,[4] and/or greater risk of default. When credit conditions eased, the converse would be true.

Proxies for credit records

While students usually do not have their own separate credit records, lenders can find proxies for some indicators. One source is the default record of previous borrowers at the educational institution the student plans to attend. A second source is the credit rating and history of the student's family. It is a common practice for lenders in the Guaranteed Loan Program to insist on a prior "customer relationship" with the student or his or her family as a condition of making a loan.[5] Although the use of bank accounts and credit is widespread in American society it seems reasonable to expect that families with higher incomes will have higher credit ratings (other things being equal) and that members of minority groups, because of the social and economic disadvantages associated with that status, would be less likely to come from families with strong credit ratings. Similarly, because they are older and more likely to be economically independent of their parents, graduate students would be less likely to be able to rely on parental credit ratings in securing Guaranteed Loans. Since graduate students' own incomes and credit histories are likely to be meager, they too would be at a disadvantage in securing loans from private lenders.

The practice of insisting on a prior customer relationship is undoubtedly related to the need to assess the risk of default. It is also possible that student loans are regarded as either a loss-leader or as part of a tied-in sale. Certainly the frequent assertion by lenders that student loans are a "service" activity would encourage such an interpretation.[6] While it is impossible to specify what additional business (and profits) lenders would expect to realize from student lending per se it is certainly reasonable to expect that students from rich families would be viewed as a more likely source of additional business—as customers for automobile loans, mortgages, and the like—than students from poor families and students from minority groups to the extent that they are economically disadvantaged.

Operationally therefore these assumptions and hypotheses would lead to the following predictions:

1. Students of equal credit-worthiness may find that the availability of loans from private lenders differs substantially between regions of a state.
2. To the extent that credit-worthiness is associated with family income, when credit is less available, poor rather than rich students will be excluded from participation in the Guaranteed Student Loan Program.

3. Other things being equal, a shortage of loans will obstruct access to Guaranteed Student Loans for students who are members of economically disadvantaged minority groups, who attend types of institutions with high default rates, and/or who are graduate students independent of parental support.

Evaluating Accessibility

There are many possible ways to evaluate access to Guaranteed Student Loan Program loans. For example, one might attempt to survey the entire class of eligible borrowers to find out whether they had borrowed, or attempted to borrow, or wished to borrow; what their experiences had been with lenders; and how accessible they perceived the program to be.

This study relies instead on data concerning actual borrowers in the state of Michigan over a four-year period. Because of its history and structure, the Guaranteed Student Loan Program of the state of Michigan offered an opportunity to study certain aspects of the operation of a student loan program free of the distractions and distortions present in other states. Michigan's Guarantee Agency program dominates student lending in the state. Students from proprietary and vocational schools are eligible to borrow under the program as are Michigan residents attending out-of-state schools. There have been few scandals associated with the behavior of either lenders or schools. Only one institution, the University of Michigan, has been a significant lender under the separate federally controlled FISL program. Almost all other lending has come under the purview of the state guarantee agency.[7]

Michigan therefore provided an opportunity to study the question of variations in access to loans from private commercial lenders in a situation where the program-wide default rate was relatively low[8] and the population of potential borrowers included almost all the eligible borrowers within the state.

Data sources and methodology—a brief summary

In order to test the hypotheses outlined above, three different approaches were employed. In the first instance overall program data for the Michigan Guaranteed Loan Program in the years

1971–72 through 1974–75 were analyzed. As a part of this overview the state was divided into regions, and lending rates and ratios for private lenders were calculated for each region. A simple test for the effect of default rates on lender behavior was attempted for the urban regions of the state.

Since the Guaranteed Student Loan Program is only one of several sources of financial aid for postsecondary students in Michigan, it is possible that differences in observed borrowing rates may more nearly reflect either differences in "need" or in the availability of other forms of financial aid rather than differences in access to Guaranteed Loans. Obviously the best way to resolve this matter would be an analysis based on individual student data on financial need, aid from other sources, and attempts to borrow under the Guaranteed Loan Program. Although such records are not available, it was possible to study Guaranteed Loan Program borrowing rates at 82 colleges and universities in the state of Michigan in relation to other forms of financial aid available to students at those institutions in the academic year 1974–75. Linear regression was used to test the contribution of various factors affecting the observed borrowing rates for 1974–75 and the changes in those rates between 1971–72 and 1974–75.

Finally, as a means of testing the predictions concerning which students would be able to secure loans from private commercial lenders, a cross-section comparison was made for the year 1974–75 for all Guaranteed Loan Program borrowers at one major university. The characteristics of borrowers who secured loans from private lenders were compared with the characteristics of those students who had to take advantage of the university's program of acting as a lender of last resort.

NOTES

1. Credit unions, because of their service obligations to their members, may seem to differ significantly from commercial banks, savings banks, and savings and loan associations. For the purposes of this study, however, it is appropriate to group credit unions with the other three types of institutions since they share the essential characteristics of private commercial lenders, namely a wide scope of lending activities and the consequent need to choose from among alternative placements for available funds.
2. The existence of shortages has been frequently alluded to in congressional hearings. The author of one of the few surveys of lenders conducted on behalf of HEW comments: "The primary factor in profitability, however, is that revenues have been considerably less for student loans than for other consumer loans." *Analysis of Student Loan Special Rate Allowances and Servicing Costs* (Cambridge, Mass.: Technology Management, Inc., 1974), p. 13.

3. Under the Guarantee Agency Program in Michigan the principal, but not accrued interest, is guaranteed.
4. Higher collection costs need not imply greater risk of default. The law permits lenders to make loans to students whose family incomes are too high to qualify them for the interest subsidy; however, the cost of collecting the interest while the student is in school is so high that lenders frequently refuse to make such loans.
5. It also seems to be a common belief among persons familiar with the operation of the program that the strength of the association of the student with his or her family is greater in small towns and more rural areas, where banking relationships are thought to be more personal and where social pressure can be more easily brought to bear on a delinquent borrower.
6. Another possible consideration is that, regardless of the direct losses from student loan defaults, lenders may feel that making loans with a high default rate—even with a guarantee of the principal—will lead to a breakdown in borrower perception of the need to repay loans in other lines of business.
7. As of June 30, 1975, 133,225 loans had been guaranteed in Michigan since the inception of the federal program. Of these, 3,795 were insured under the FISL Program and 129,430 under the State Guarantee Program. (*Guaranteed Student Loan Program Monthly Report*, June 1975 [U.S., Department of Health, Education, and Welfare, Office of Education, Office of Guaranteed Loans, Washington, D.C.], p. 2.)
8. As of June 30, 1975, 4.5 percent of the students whose loans, guaranteed under the Michigan program, had entered the repayment stage (i.e., had matured) had defaulted. (Michigan Department of Education, Student Financial Assistance Services, *Annual Report* 1974–75 [Lansing], p. 37.)

III

BORROWERS AND LENDERS IN MICHIGAN: THE STATE AND ITS REGIONS

The Michigan Guaranteed Loan Program made its first loans to students in 1962 as a state venture. Subsequently it joined the Federal Guaranteed Student Loan Program as a State Guarantee Agency. Table 3 shows the number of loans guaranteed, the amount guaranteed, and the size of the average loan for the years in the period 1962–63 through 1974–75. The number of loans and the total value guaranteed as well reached a peak in fiscal year 1971–72. Both figures fell sharply in 1972–73 and 1973–74 and then revived in 1974–75.

There were two causes of these shifts. First, the 1972 Amendments to the Higher Education Act required a needs analysis for all borrowers under the program rather than only for those with family incomes above $15,000, as had been the case previously. This requirement imposed an enormous new administrative burden on all parties and caused a great deal of initial confusion in the administration of the program. The requirement was modified in April 1974, but in the interim it greatly hindered student borrowing. Secondly, as early as 1968 the long-term rise in interest rates noticeably curbed lender interest in the program and, combined with the administrative burden of the needs analysis, caused many lenders either to withdraw from the program altogether or to cut back on new lending.

Table 4 shows the characteristics of student borrowers in the total Michigan program during this period, and Table 5 shows their distribution by type of institution attended. Table 6 attempts to relate some of these figures to available enrollment statistics for full-time students at colleges and universities within

the state of Michigan. In this study full-time enrollment has been used as the measure of attendance. Not only are part-time students less likely to meet need tests for aid than are full-time students, but during the period covered by the study part-time students were excluded from many forms of aid.[1]

Looking first at Table 4 we see that the proportion of women among the borrowers increased slightly in this period. Since 43 percent of full-time students at Michigan colleges and universities were women in 1974–75, the sex distribution of borrowers appears to be consistent with the proportion of males and females in the student population. While graduate and professional students increased both absolutely and as a proportion of all borrowers, there was no marked shift in the borrowing activity of the undergraduate classes. Freshmen remained the largest single class of borrowers. Data on the proportion of first loans and of renewals are not available for 1971–72. Available data for the following years do suggest, however, that, even though loans were scarce in 1972–73 and 1973–74, lenders in Michigan did not restrict available funds to former borrowers. In all years new loans were in the majority.

The data of Table 5 also support this perception of moderate change in a basically stable pattern. Students at public four-year schools within the state of Michigan and students at out-of-state schools claimed relatively fixed shares of the smaller pool of loans. Community college and vocational-technical students suffered substantial displacement in absolute numbers of loans and a smaller loss in relative shares. The major gains were made by students at private colleges and universities, who increased their absolute number of loans and their share of the total.

Table 6, which compares loans approved with full-time enrollment, places some of the figures of Tables 4 and 5 in a different perspective. We see that the changes in borrowing rates among classes of institutions noted in Table 5 are even more striking when compared with changes in enrollments. The public four-year colleges and universities remained the largest borrowers, but by 1974–75 the private institutions as a class were borrowing at a rate nearly equal to theirs. On the other hand, community colleges, whose enrollments of full-time students increased by 44 percent, ended the period with a borrowing rate less than half that of 1971–72. It should be noted too that since community colleges have relatively large numbers of part-time students the use of full-time enrollment in these calculations particularly understates the change in their situation.

Table 3

LOANS APPROVED UNDER THE MICHIGAN GUARANTEED LOAN PROGRAM, 1962–63 THROUGH 1974–75

Year	Number of Loans	Amount Guaranteed ($ Millions)	Average Loans
1962–63	237	.144	$ 607
1963–64	991	.681	687
1964–65	1,667	1.145	687
1965–66	3,146	2.042	649
1966–67	5,130	3.769	735
1967–68	8,706	7.140	820
1968–69	10,925	8.273	757
1969–70	12,340	10.721	869
1970–71	17,797	16.520	930
1971–72	21,479	21.976	1,023
1972–73	17,948	19.196	1,070
1973–74	14,455	15.914	1,101
1974–75	18,057	20.872	1,155

Note: Includes loans to students at vocational schools beginning in 1967–68.

Sources: Michigan Department of Education, Student Financial Assistance Services, *Annual Report*, 1971–72, p. 8; 1972–73, p. 16; 1973–74, p. 19; 1974–75, p. 24.

Table 4

CHARACTERISTICS OF STUDENT BORROWERS, 1971–72 TO 1974–75

	1971–72		1972–73		1973–74		1974–75	
Characteristic	No.	%	No.	%	No.	%	No.	%
Sex								
Male	...	61	...	60	...	56	...	58
Female	...	39	...	40	...	44	...	42
Class Level								
Freshman	6,065	28	4,322	26	3,644	25	4,695	26
Sophomore	4,635	22	3,479	21	2,909	20	3,431	19
Junior	4,306	20	3,489	21	2,737	19	3,395	19
Senior	3,976	19	3,392	20	2,789	19	3,160	17
Grad./Prof.	2,456	11	2,195	12	2,376	17	3,348	19
Special	27	...	...	...	...	...	...	...
First Loan	n.a.*	...	...	52	...	52	...	57
Subsequent Loan	n.a.	...	...	48	...	48	...	43

*n.a. = not available.

Note: Based on loan approvals, except for 1972–73, where figures are based on disbursements.

Sources: Michigan Department of Education, Student Financial Assistance Services, *Annual Report*, 1971–72, p. 19; 1972–73, p. 18; 1973–74, p. 21; 1974–75, p. 15.

Table 5

DISTRIBUTION OF APPROVED LOANS BY TYPE OF INSTITUTION, 1971–72 TO 1974–75

Type	1971–72		1972–73		1973–74		1974–75	
	No.	%	No.	%	No.	%	No.	%
Michigan Schools								
Public—4-Year	13,567	63	10,799	60	9,338	65	11,383	63
Community Colleges	2,181	10	1,693	10	1,091	7	1,492	8
Private (2- and 4-year)	2,211	10	2,172	12	1,549	11	2,581	14
Vocational and Technical	859	4	585	3	586	4	366	2
In-State	18,818	87	15,249	85	12,564	87	15,822	87
Out-of-State	2,661	13	2,699	15	1,891	13	2,235	13
Total	21,479	100	17,948	100	14,455	100	18,057	100

Source: Michigan Department of Education, Student Financial Assistance Services, *Annual Report*, 1971–72, p. 18; 1972–73, p. 17; 1973–74, p. 20; 1974–75, p. 25.

Table 6

LOANS APPROVED AND FULL-TIME STUDENT ENROLLMENT AT MICHIGAN COLLEGES AND UNIVERSITIES, 1971–72 COMPARED TO 1974–75

	Loans		Enrollment		Loans per 1,000 Students	
Borrowers	1971–72	1974–75	1971–72	1974–75	1971–72	1974–75
Undergraduate Students						
Public, 4-year	13,567	11,383	162,619	164,469	83.4	69.2
Public, 2-year	2,181	1,492	39,051	56,335	55.9	26.4
Private, 2- and 4-year	2,211	2,581	37,578	39,215	58.8	65.8
*Graduate Students**						
All Institutions	2,137	2,913	25,303	29,391	84.4	99.1
		2,534†				86.2†

*Estimated, assuming that 87 percent of loans to graduate students shown in Table 4 were made to students at Michigan colleges and universities.

†Estimated, deducting GSL loans made to its own students by an educational institution which was not making loans in 1971–72.

Sources: Michigan Department of Education, Office of Student Financial Assistance Services, *Annual Report*, 1971–72, p. 18; 1974–75, p. 25 (for totals of loans); Michigan Department of Education, Division of Higher Education Management, *Postsecondary Educational Needs in Michigan*, 1975, pp. 29, 30, 32 (for 1974–75 enrollments); and unpublished tables (for 1971–72 enrollments).

For the Michigan Guaranteed Loan Program as a whole, differences in the amount borrowed either by institution attended or by lender appeared to be less important than the numbers of loans approved. However, community college borrowers have tended to borrow about $200 less than the average loan under the program. Furthermore, while the average in-state loan rose 13 percent (from $1,001 to $1,134) between 1971–72 and 1974–75, the average loan to a community college student rose only 3 percent (from $906 to $935) in the same period.[2]

The fact that Table 4 shows graduate and professional students increasing both absolutely and as a proportion of all borrowers is surprising to those acquainted with the difficulties reported by graduate and professional students seeking loans. Indeed these figures appear at first to contradict the findings of the analysis of borrowing at one Michigan university in 1974–75 (to be presented in Chapter V).

Available statistics for the Michigan Guaranteed Loan Program do not separate graduate student loans according to in-state or out-of-state institutions. In Table 6 it is assumed that 83 percent of graduate student borrowers attended Michigan institutions (the same proportion as in the entire program). Under this assumption the borrowing rate for graduate students was approximately equal

to the overall rate for public four-year colleges and universities in 1971–72. On this basis the borrowing rate for academic year 1974–75 was 99 per thousand graduate students. Adjusting this estimate further by deducting loans from a school lender which was not making loans in 1971–72 yields a rate of borrowing from private commercial lenders of 86 per thousand in 1974–75.

This rate would mean that loans from private lenders to graduate students were granted at a constant rate in the period 1971–75, constituting an improvement in their relative status. If the situation of the university described in Chapter V is typical, however, only half of the graduate students were able to secure private loans. Since other aid to graduate students decreased markedly in this period, these findings would also be consistent with the conclusions of Breneman and Collins that, while borrowing had increased, there were continued difficulties for graduate students seeking loans.[3]

Throughout this period commercial banks were the primary source of loans under the Michigan program. As Table 7 shows, there was some slight increase in lending by credit unions and savings and loan associations, but—as is true nationally[4]—these two sources remain largely untapped for student loans. In 1974–75 only 22 percent of the state's credit unions and 26 percent of its savings and loan associations had even signed participation agreements under the program. While 78 percent of the state's commercial and savings banks had signed participation agreements by 1974–75, only 362 actually processed any loans in that year, nor had 26 of the 33 nonlending banks made a student loan during the preceding fiscal year.[5] As the Michigan Department of Education pointed out in its *Annual Report*, decreased lender participation presented a serious obstacle to would-be borrowers since so many lenders in Michigan lent only to previous customers.[6] The decrease in the proportion of commercial bank loans is significant when compared with the increased participation by "other" lenders. This latter category is dominated by schools acting as lenders to their own students. We see here that a small but growing share of GSLP loans was being made by schools acting as lenders of last resort.

Regional Lending Rates

The behavioral assumptions and hypotheses outlined in Chapter II would lead us to predict that access to student loans would vary from one region of the state to another. To test this hypothesis it

Table 7

DISTRIBUTION OF LOANS BY TYPE OF LENDING INSTITUTION FOR 1971–72 TO 1974–75

Type of Institution	1971–72	1972–73	1973–74	1974–75
Commercial Banks	n.a.	14,452	11,998	14,608
Credit Unions	n.a.	1,188	1,012	1,318
Savings & Loan Assns.	n.a.	1,232	725	1,300
Other (incl. schools)	n.a.	5	720	831
Total	21,479 (approved)	16,877 (disbursed) 17,948 (approved)	14,455 (approved) 14,052 (disbursed)	18,057 (approved) 17,570 (disbursed)
		Percentage Distribution		
Commercial Banks	n.a.	86	83	81
Credit Unions	n.a.	7	7	7
Savings & Loan Assns.	n.a.	7	5	7
Other (incl. schools)	n.a.	. . .	5	5

Note: Loans approved are not always disbursed; they may also be disbursed in a later fiscal year. For similar reasons the totals of loans disbursed by private lenders within regions (Table 9) differ from the totals given here.

Sources: Michigan Department of Education, Office of Student Financial Assistance Services, *Annual Report*, 1971–72, p. 19; 1972–73, p. 18; 1973–74, p. 21; 1974–75, p. 15.

was necessary to divide the state into regions on a basis consistent with our understanding of existing spheres of economic activity and to assign all lenders to regions. This task was made easier by the fact that the state's limitations on branch banking restrict the service areas of participating commercial banks.

Since the primary objective was to define service areas for lenders, the U.S. Census of Population's definition of Standard Metropolitan Statistical Areas (SMSA's) seemed an appropriate starting point. Eleven such areas were defined in Michigan in the 1970 Census of Population. The remainder of the state was divided into five regions, again guided by a general understanding of areas of economic activity within the state. The Upper Peninsula was one such region, and the non-SMSA counties north of the Bay City–Saginaw line formed another. The southern part of the Lower Peninsula was divided into three regions: an eastern region composed mainly of the Thumb counties, and somewhat arbitrary groupings of central and western counties. A list of counties in each region is contained in the Appendix. Table 8 displays the absolute numbers of new loans approved for private lenders in each region of the state during the years of the study. As a check on the accuracy of these assignments of lenders to

regions of the state, data on county of residence supplied by student borrowers, which were available for the year 1971–72, were compared to the estimate of loans in each region from the bank data. The comparison showed substantial agreement.[7]

Table 8

NEW LOANS APPROVED BY PRIVATE COMMERCIAL LENDERS, ESTIMATED BY REGION, 1971–72 TO 1974–75

Region	1972	1973	1974	1975
SMSA's				
Detroit	4,480	3,908	3,028	3,608
Ann Arbor	371	435	386	434
Bay City	387	322	218	267
Flint	2,136	2,017	1,603	1,947
Grand Rapids	1,941	1,456	1,194	1,578
Jackson	183	169	114	123
Kalamazoo	1,080	758	705	724
Lansing	887	714	458	405
Muskegon	432	364	278	368
Saginaw	491	419	462	650
Toledo (Monroe County)	113	73	30	6
All SMSA's	12,501	10,635	8,476	10,110
Non-SMSA's				
Upper Peninsula	1,914	1,565	1,152	1,278
Lower Peninsula—North	2,018	1,903	1,571	1,780
Lower Peninsula—West	1,799	1,443	1,070	1,201
Lower Peninsula—Central	1,278	1,162	957	1,258
Lower Peninsula—East	598	527	389	471
Total Non-SMSA's	7,607	6,600	5,139	5,988
State Total (All Private Lenders)	20,108	17,235	13,615	16,098

Sources: Figures for 1972 and 1973 are derived from unpublished data supplied by the Michigan Department of Education, Office of Student Financial Assistance Services. Figures for 1974 and 1975 are derived from Michigan Department of Education, Office of Student Financial Assistance Services, *Annual Report*, 1973–74, pp. 22–31; 1974–75, pp. 26–35.

While the absolute numbers of loans are of some interest, further analysis required that they be compared with the population of potential borrowers in each region. As an estimate of the number of potential student borrowers whose home towns were located in the different regions of the state, the number of high school students (grades 9 through 12) reported in the 1970 federal census was used. This population estimate has both strengths and weaknesses. Its principal defect lies in the fact that not all high

school students are college bound, and that, even with open admissions in community colleges, the proportion of students in various regions of the state who are—or might be—interested in borrowing money to attend a college or university may vary substantially. On the other hand, the federal census is the most complete and accurate count of school population; unlike school district data, it conforms to the SMSA boundaries and to county lines outside the SMSA's. Additionally, since guaranteed loans are supposed to be available for vocational and technical training, the population of potential borrowers should not be restricted to college-bound high school graduates.

Regional Ratios and Differences

Granted that there may be some question as to the best population measure, the regional lending rates shown in Table 9 display some marked differences between the various areas of the state. Table 10 shows these individual lending rates converted into ratios based on the statewide average rate of lending. That is,

$$\text{Regional Ratio} = \frac{\text{Loans per 1,000 students in Region } X.}{\text{State average rate of loans per 1,000 students}}$$

From Tables 9 and 10 it is clear that students in the Detroit SMSA (Wayne, Oakland, and Macomb counties) have been borrowing at less than half the state average throughout the period under consideration. At the opposite extreme, students from the Kalamazoo and Flint SMSA's and the Upper Peninsula have been borrowing at approximately twice the state average throughout the period. In addition we note that in a period when the statewide rate of lending dropped from 28.8 to 23.1 per 1,000 high school students, access to loans in some regions of the state showed sharply different trends. In two university areas, for example, we found that while loans increased in one (Ann Arbor), they fell off sharply in the other (Lansing). In Bay City loans became less available, while in neighboring Saginaw there was a sharp increase in the relative rate of lending.

Test of the default rate explanation

Given the amount of publicity over default rates in the Guaranteed Loan Program nationally, a difference in loss experience is usually the first explanation offered for any regional difference in

Table 9

ESTIMATES OF LOANS PER 1,000 POTENTIAL BORROWERS (1970) BY REGION, 1971–72 TO 1974–75

Region and No. of Potential Borrowers*	1972	1973	1974	1975
SMSA's				
Detroit (331,292)	13.5	11.8	9.1	10.9
Ann Arbor (14,040)	26.4	31.0	27.5	30.9
Bay City (9,795)	39.5	32.9	22.3	27.3
Flint (40,385)	52.9	49.9	39.7	48.2
Grand Rapids (44,568)	43.6	32.7	26.8	35.4
Jackson (11,294)	16.2	15.0	10.1	10.9
Kalamazoo (14,709)	73.4	51.5	47.9	49.2
Lansing (26,609)	33.3	26.6	17.2	15.2
Muskegon (13,346)	32.4	27.3	20.8	27.6
Saginaw (18,259)	26.9	22.9	25.3	35.6
Toledo (Monroe County) (9,354)	12.1	7.8	3.2	.6
All SMSA's (533,651)	23.4	19.9	15.9	18.9
Non-SMSA's				
Upper Peninsula (25,195)	76.0	62.1	45.7	50.7
Lower Peninsula—North (45,048)	44.8	42.2	34.9	39.5
Lower Peninsula—West (44,918)	40.1	32.1	23.8	26.7
Lower Peninsula—Central (29,570)	43.2	39.3	32.4	42.5
Lower Peninsula—East (18,955)	31.5	27.8	20.5	24.8
All non-SMSA regions (163,686)	46.5	40.3	31.4	36.6
State—Total (Census 697,427)	28.8	24.7	19.5	23.1

*Number of potential borrowers estimated to equal number of students grades 9–12 reported in 1970 federal census.

Sources: Loan estimates in Table 8; and U.S., Bureau of the Census, Census of Population: 1970, *General Social and Economic Characteristics, Final Report* PC(1)–C24 (Washington, D.C., 1972), pp. 24–544 to 24–550.

lending behavior. Unfortunately, a breakdown of default rates by lender has not been routinely available. The first such complete listing is a cumulative one for the end of the fiscal year 1975–76. This listing identified all defaults from delinquency or bankruptcy as a percentage of all *mature* loans made by each lender through June 30, 1976.[8]

As a test of the default rate explanation a weighted average of the cumulative default rate was computed for major lenders in all

Table 10

ESTIMATED REGIONAL RATIOS OF LOANS TO STATEWIDE AVERAGE, 1971–72 TO 1974–75

Region	1972	1973	1974	1975
SMSA's				
Detroit	.47	.48	.47	.47
Ann Arbor	.92	1.25	1.41	1.34
Bay City	1.37	1.33	1.14	1.18
Flint	1.83	2.02	2.03	2.09
Grand Rapids	1.51	1.32	1.37	1.53
Jackson	.56	.61	.52	.47
Kalamazoo	2.54	2.09	2.46	2.13
Lansing	1.16	1.08	.88	.66
Muskegon	1.12	1.10	1.07	1.10
Saginaw	.93	.93	1.30	1.54
Toledo (Monroe County)	.42	.32	.16	.03
All SMSA's	.81	.81	.81	.82
Non-SMSA Regions				
Upper Peninsula	2.64	2.51	2.34	2.20
Lower Peninsula—North	1.55	1.71	1.79	1.71
Lower Peninsula—West	1.39	1.30	1.22	1.16
Lower Peninsula—Central	1.49	1.59	1.66	1.84
Lower Peninsula—East	1.09	1.13	1.05	1.08
All non-SMSA regions	1.61	1.63	1.61	1.58

Source: Derived from Table 9.

the SMSA's. The weights were the number of mature loans for each lender. Major lenders were defined as commercial banks which made 25 loans or more in any year from 1971–72 through 1974–75. In Table 11 these estimates of the default experience for each region's lenders are compared with the percentage changes in the loan rates of Table 9 and the loan ratios of Table 10. No consistent pattern of behavior emerges. Muskegon and Bay City had identical default rates; Muskegon's relative lending rate increased, while Bay City's decreased. Detroit and Ann Arbor offer similar contrasts, as do Jackson and Saginaw. Toledo (Monroe County) had the lowest default rate and the largest decrease in its relative lending rate. The correlation coefficient (R) between the default rate and the percentage change in the loan ratio was .5387—indicating that a high default rate would be associated with an *increase* in relative availability of loans. This coefficient is not significant at the 5 percent level of confidence, and furthermore the sign is contrary to the usual expectation that a high default rate will be associated with a decrease in lending.

Table 11

ESTIMATED CUMULATIVE DEFAULT RATES FOR MAJOR LENDERS AND CHANGES IN LENDING PATTERNS FOR SMSA's, 1971–72 TO 1974–75

Region	Default Rate* in Percentages (6/30/76)	Percentage Change in Loans per 1,000 Students†	Percentage Change in Loan Ratio‡
Detroit	10.3	−19.4	0.0
Ann Arbor	10.4	+17.0	+45.7
Bay City	5.9	−31.0	−13.9
Flint	14.6	− 8.8	+14.2
Grand Rapids	5.3	−18.7	+ 1.3
Jackson	11.5	−32.8	−16.1
Kalamazoo	10.7	−33.0	−16.1
Lansing	9.1	−54.3	−43.1
Muskegon	5.9	−14.8	+ 6.3
Saginaw	11.8	+32.4	+65.6
Toledo	3.8	−94.7	−92.9

*Cumulative defaults rate on matured loans for major lenders as of June 30, 1976. Estimated from unpublished data supplied by the Michigan Department of Education, Office of Student Financial Assistance Services.

†Percentage change in the rate of loans per 1,000 high school students, derived from Table 9.

‡Percentage change in the ratio of loans per 1,000 students to the statewide average, derived from Table 10.

How well do these findings bear out the hypotheses set forth in Chapter II? Certainly they are consistent with the expectation that there would be regional differences in lending to students. The fact that the changes observed in regional lending rates and ratios were not correlated with the default experience of lenders does not contradict those predictions. It is quite possible that the fundamental factors related to the supply and demand for loanable funds within regions dominated the influence of the default rate taken by itself.

Given the national statistics on the high default rates of vocational school and community college students cited in Chapter I, one would expect a decrease in lending to such students during a period of credit stringency. The change in Michigan lending patterns is consistent with that expectation. The improved relative status of private school students is also consistent with their national default record. No separate default rates have been calculated for graduate students. While it is possible that the relative improvement in borrowing by graduate students which was observed reflects a change in lenders' perceptions of their credit worthiness, it is more likely that substantial reductions in support for graduate education left graduate students needier than before

vis à vis undergraduate students and thus more active as loan applicants.

NOTES

1. Source: Michigan Department of Education, Higher Education Management, *Postsecondary Educational Needs in Michigan—1975*, by James C. Homan (Lansing, 1975), p. 29. There are no consistent enrollment series for students at vocational and technical schools, including non-degree-granting proprietary schools; nor are there figures for enrollments of Michigan residents at out-of-state schools.
2. Sources: Michigan Department of Education, *State Sponsored Student Financial Aid in Michigan—1971–72*, pp. 15–17; Michigan Department of Education, Office of Student Financial Assistance Services, *Annual Report*, 1974–75, p. 25. Loans to students at out-of-state schools rose from $1,182 to $1,305.
3. See David W. Breneman and Sharon Collins, "The Special Problem of Graduate Student Loan Finance," *Student Loans: Problems and Policy Alternatives*, ed. by Lois D. Rice (New York: College Entrance Examination Board, 1977), pp. 164–69.
4. As of June 1975 commercial and savings banks constituted 75.9 percent of lenders in FISL and the Guarantee Agency Program combined. Savings and loan associations accounted for 8.6 percent of lenders and credit unions 13.6 percent; 1.9 percent of the 19,177 lenders were classified as "other." Source: U.S. Department of Health, Education, and Welfare, Office of Education, Office of Guaranteed Student Loans, *Guaranteed Student Loan Monthly Report*, June 1975 (Washington, D.C.), p. 3.
5. Michigan Department of Education, Office of Student Financial Assistance Services, *Annual Report*, 1974–75 (Lansing, 1975), pp. 38–39.
6. *Ibid.*, p. 38.
7. See Table A.3 in the Appendix.
8. While in school, students are only responsible for payments of interest, which are paid by the federal government for most students. Loans are considered mature when a student has left school, and the student is responsible for payments of principal as well as interest.

IV

RATES OF BORROWING AT MICHIGAN COLLEGES AND UNIVERSITIES

We have established that there were regional differences in student loan borrowing rates within the state of Michigan and also that borrowing rates differed by type of school attended. Such differences in actual borrowing could reflect either differences in "need" and hence demand for loans, or in supply—i.e., access to loans. Most likely they reflect the interaction of factors on both sides of the market. In this chapter we attempt to assess the relative importance of several factors which can be expected to influence observed variations in borrowing under the Guaranteed Student Loan Program.

Ideally such a study would use individual students as the units of analysis, considering demands for guaranteed student loans in the light of total student resources and costs of education. While it was not possible to study individual students, it was possible to consider Guaranteed Loan Program borrowing at the colleges and universities of the state of Michigan in relation to other forms of financial aid available in 1974–75 and to an institutional estimate of needy students enrolled in that year.

Of the several forms of financial aid available to students Guaranteed Student Loans offer relatively unattractive terms. Scholarships and grants do not have to be paid back; National Direct Student Loans have lower interest charges and more liberal forgiveness features; even the Work-Study Program, although it takes time away from academic pursuits, has the advantage of providing current income without future obligations. Thus Guaranteed Loans are sought by students for whom other forms of aid are not available, who do not qualify for other financial aid programs (usually because their family incomes are too high), or who need to supplement other aid.

Initially then, it would seem reasonable to expect that, the greater the amount of other financial aid available the lower would be the borrowing rate for Guaranteed Loans among students at a college or university. Similarly, all other things being equal, a larger percentage of students qualified as "needy" would lead to a higher rate of Guaranteed Loan borrowing.

In the state of Michigan the mean cost of tuition and fees for residents is lowest at the community colleges and highest at private colleges and universities, with the public four-year institutions in the middle. In the academic year 1974–75 the mean charges for tuition and fees for these classes of institution were $366, $1,576, and $619, respectively.[1] Although tuition charges are not the whole of educational costs or even necessarily a good proxy for what it costs typical students to attend a particular school, nevertheless, other things being equal, it would seem reasonable to expect that students would have a greater need to borrow when tuition charges are higher, as at private schools. Similarly, it would seem reasonable to expect that the combination of low tuition and a student body living at home—found at community colleges—would lead to lower demand for loans. There are also reasons to believe that community college students come from families with a lower socioeconomic status than that of private school students, and they are thus likely to have more problems finding willing lenders.[2]

While the Michigan Department of Education had routinely collected enrollment data for the degree-granting colleges and universities of the state, there was no systematic collection of comparable data on student financial aid until 1974–75, when the Michigan House of Representatives authorized a special committee[3] to study financial aid for undergraduate students. That study provided comparable data for 82 colleges and universities within the state and thereby presented an opportunity to estimate the relative importance of the factors discussed above in determining differences in borrowing under the Guaranteed Student Loan Program.

The 82 colleges and universities in this sample include the 15 state colleges and universities, the 29 community colleges, and 38 two-year and four-year degree-granting private colleges and universities. The two major omissions are the Detroit College of Law and Cooley Law School, both of which have no undergraduate students and therefore did not participate in the Survey of Undergraduate Financial Aid. No vocational schools are included, but the 82 institutions included in this group may appropriately be treated statistically as approximating the universe of the state's colleges and universities rather than as being only a sample of them.

In Table 12 loans from private commercial lenders approved for students at these various colleges and universities are presented in terms of borrowing rates defined as loans per thousand full-time students.[4] The averages shown for categories of schools are weighted by each institution's enrollment. Again we observe the drop in average rates of borrowing by all categories of students and the substantial decline in lending to community college students noted in Chapter III. The default rates presented in Table 12 are the first calculated for the separate schools participating in the Michigan program and are based on the numbers of borrowers rather than the amount borrowed. They represent defaults by students who transferred neither into nor out of a given school, and whose defaults are from delinquency rather than death, disability, or bankruptcy. The average default rates shown for classes of institutions were calculated as the sum of all defaulting borrowers within each class, divided by the sum of all borrowers from that class whose loans had matured.

Table 12

PRIVATE GUARANTEED STUDENT LOANS PER 1,000 FULL-TIME STUDENTS—MICHIGAN COLLEGES AND UNIVERSITIES, 1971–72 TO 1974–75

Institution	1971–72	1972–73	1973–74	1974–75	Default Rate as of 6/30/76 (in Percentages)
Public 4-year					
Central	123	118	102	110	3.9
Eastern	64	47	35	42	8.3
Ferris	159	107	85	95	6.5
Grand Valley	123	81	56	62	10.8
Lake Superior	158	102	82	104	5.1
Michigan State	79	64	51*	57*	5.4
Michigan Tech.	150	112	92	97	4.1
Northern	165	143	115	136	8.8
Oakland	38	26	21	31	7.5
Saginaw Valley	121	98	62	70	14.2
U. of M.–Ann Arbor	45*	39	39	44	5.4
Dearborn	38*	23	13	14	6.4
Flint	132*	98	63	52	17.8
Wayne	23	23	21	29	9.6
Western	117	91	73	78	6.2
Avg.—4-Year Public†	81	66	54	61	6.4‡

Note: Excludes loans by schools to their own students.

*Estimated.

†Weighted by enrollment.

‡Total defaults divided by total matured loans for all schools within each category.

Table 12, *continued*

Institution	1971–72	1972–73	1973–74	1974–75	Default Rate
Community Colleges					
Alpena	66	56	49	43	9.5
Bay de Noc	256	102	75	71	4.5
C.S. Mott	177	152	93	81	35.8
Delta	88	36	23	65	20.8
Glen Oaks	97	41	41	24	21.8
Gogebic	92	90	73	81	11.1
Grand Rapids	60	27	16	26	11.1
Henry Ford	11	6	5	5	4.8
Highland Park	19	24	14	7	21.4
Jackson	43	14	7	4	5.4
Kalamazoo Valley	150	72	31	57	30.8
Kellogg	79	34	14	27	8.4
Kirtland	253	104	73	69	13.8
Lake Michigan	67	62	35	18	32.0
Lansing	59	28	17	17	19.0
Macomb County	6	4	4	5	19.8
Mid-Michigan	280	134	154	233	17.6
Monroe County	12	7	4	9	5.9
Montcalm	52	69	12	43	10.4
Muskegon	25	18	11	13	14.9
North Central Michigan	48	65	56	65	5.6
Northwestern Michigan	177	65	61	59	7.2
Oakland	15	6	2	3	30.0
Schoolcraft	9	2	0§	2	6.9
Southwestern Michigan	381	137	115	88	32.4
St. Clair County	38	28	11	21	8.5
Washtenaw	72	24	10	17	30.5
Wayne County	5	3	3	4	31.8
West Shore	130	83	20	33	29.6
Avg.—Comm. Coll.†	55	34	22	26	20.8§
Independent 2- and 4-Year, Degree-Granting					
Adrian College	65	53	46	53	7.1
Albion College	31	34	48	41	2.8
Alma College	77	80	59	92	4.6
Andrews University	102	62	46	66	10.6
Aquinas College	125	104	83	151	5.6
Calvin College	39	26	22	29	2.0
Cleary College	53	30	14	12	6.8

†Weighted by enrollment.
§Less than .5.

Table 12, *continued*

Institution	1971–72	1972–73	1973–74	1974–75	Default Rate
Coll. for Art & Design	0	66	57	52	15.2
Cranbrook Academy	47	61	62	45	9.1
Concordia Lutheran Jr. Coll.	28	41	17	18	9.1
Detroit Bible Coll.	20	40	17	17	5.0
Detroit Coll. of Bus.	24	7	3	3	0
Detroit Inst. of Tech.	25	5	7	9	22.5
General Motors Institute	13	9	8	14	3.0
Grace Bible Coll.	41	85	74	52	4.8
Gr. Rapids Baptist Coll. & Sem.	119	131	107	109	3.0
Hillsdale College	46	35	24	30	12.4
Hope College	43	41	39	45	5.1
John Wesley Coll. at Owosso	114	163	182	208	14.7
Kalamazoo College	73	68	58	57	6.5
Lawrence Inst. of Tech.	19	12	11	11	4.7
Madonna College	40	28	34	28	5.0
Marygrove College	71	55	33	21	10.0
Mercy College of Detroit	24	31	26	40	8.0
Merrill-Palmer Inst.	19	0	0	86	.0
Mich. Christian Jr. Coll.	43	50	85	59	.0
Muskegon Bus. College	243	104	79	57	n.a.
Nazareth College	83	121	168	147	4.3
Northwood Inst.	69	85	70	95	10.1
Olivet College	174	180	132	129	6.9
Reformed Bible College	38	0	12	17	.0
Sacred Heart Sem.	115	93	117	49	12.2
Shaw Coll. at Detroit	8	0	3	2	21.1
Siena Hts. Coll.	211	154	89	173	11.4
Spring Arbor Coll.	197	171	128	147	2.5

Table 12, *continued*

Institution	1971–72	1972–73	1973–74	1974–75	Default Rate
Suomi College	297	86	73	81	16.2
University of Detroit	55	59	51	59	6.9
Walsh Coll. of Accounting	44	24	28	6	.0
Avg. All Independent	61	52	44	52	7.1‡

‡Total defaults divided by total matured loans for all schools within each category.
Sources: See Appendix Table A.4.

Even a casual inspection of these statistics reveals that these colleges and universities differed substantially in student borrowing from private lenders and in defaults on Guaranteed Loans. Within the class of publicly supported four-year colleges and universities, the borrowing rates in 1974–75 ranged from a low of 29 per thousand full-time students at Wayne State University to a high of 136 per thousand at Northern Michigan University. In the same year students at Michigan's community colleges had borrowing rates ranging from a low of 2 per thousand at Schoolcraft College to a high of 233 per thousand at Mid-Michigan College. A similar range could be observed among the students at the state's private colleges and universities.

Analysis

The variables

Table 13 presents the results of a linear regression[5] in which eight variables were tested for their value as predictors of Guaranteed Student Loan borrowing from private lenders in the year 1974–75. The specific sources of data for each regression variable are presented in Appendix Table A.4. The dependent variable is the rate of borrowing shown in Table 12, loans per thousand full-time students. The first two independent variables are dummy variables which have the value of 1 in the case of a four-year college and in the case of a privately rather than a publicly supported college. Variables GIFTAID, SOFTLOANS, and PCNEEDY were obtained from the Survey of Undergraduate Financial Aid.

Table 13

ANALYSIS OF THE EFFECT OF EIGHT VARIABLES ON RATES OF BORROWING FROM PRIVATE LENDERS, 1974–75

Variable	Partial Correlation Coefficient (*R*)	Regression Coefficient	Standard Error	*t*-Statistic	Significance Level	Partial R^2
Constant	...	−10.08	15.53	−.649	.519	...
PRIVATE	−.138	−16.41	13.83	−1.187	.239	.019
FOURYEAR	.163	17.58	12.57	1.398	.166	.026
GIFTAID	.319	.06	.02	2.856	.006	.102
SOFTLOANS	−.063	−.04	.07	−.539	.592	.004
PCNEEDY	−.094	−.52	.65	−.804	.424	.009
GSLRATIO	.507	36.59	7.34	4.985	.000	.259
GRADS	.092	29.85	37.93	.787	.434	.009
DEFAULTS	−.084	−44.42	61.62	−.721	.473	.007

Least Squares Regression Analysis of Variance of Borrowing Rate = Loans per Thousand Students N = 81 out of 82

Source	Degrees of Freedom	Sum of Squares	Mean Square	*F*-Statistic	Significance
Regression	8	71090.	8886.2	5.5866	.0000
Error	72	.11452 +6	1590.6		
Total	80	.18561 +6			

Multiple R = .61887 R-Square = .38300 Standard Error = 39.883

Note: GIFTAID = scholarship and grant aid received by undergraduates from all sources, divided by full-time undergraduates for fall 1974; SOFTLOANS = National Direct Student Loan Fund money available for new loans to undergraduates for 1974–75, divided by number of full-time undergraduates; PCNEEDY = number of applicants for financial aid 1974–75 expected to be found eligible under standard measures of need, divided by full-time undergraduate enrollment; GSLRATIO = 1974–75 ratio of Guaranteed Student Loan rate (per 1,000 potential borrowers) for private lenders in school's region to statewide GSL average rate, as derived in Chap. III.
Sources: See Appendix Table A.4 for data sources.

GIFTAID has the value of the dollars of scholarship and grant aid received by undergraduates at a given institution from all sources in 1974–75, divided by the number of the institution's full-time undergraduate students reported for the fall of 1974. The fourth variable is called SOFTLOANS because its principal component is the amount of National Direct Student Loan Fund money available for new loans to undergraduates at each participating school in 1974–75. Loans from other institutional funds—but no GSL or FISL loans—are included as well and divided by full-time undergraduate enrollment, as for GIFTAID.

PCNEEDY represents the number of undergraduate applicants for financial aid for 1974–75 expected to be found eligible according to one of the standard measures used in needs analysis, divided by full-time undergraduate enrollment, as in the two preceding cases. As noted in the *Final Report* on the Survey of Undergraduate Financial Aid, the estimate of needy students was made a year ahead of time and is, on that account, somewhat unreliable.[6] Perhaps a more important weakness in the figure derives from the probability that students who would qualify as needy do not apply for financial aid if they hear that there are no resources to provide such aid. It would seem likely therefore that, for institutions lacking the means to aid students, PCNEEDY may underestimate the proportion of undergraduate students eligible for aid.

Since the financial aid reported as the basis for GIFTAID and SOFTLOANS was for undergraduates only, the variable GRADS was used to represent the additional demand for Guaranteed Loans by graduate students. GRADS was defined as the percentage of graduate and professional students in an institution's full-time enrollment in the fall of 1974. The variable DEFAULTS has the values shown in Table 12.

The variable called GSLRATIO is the 1974–75 ratio of the Guaranteed Student Loan rate for the region of the state in which the college or university is located to the statewide average rate as shown in Table 10 (Chapter III). It is intended to represent the willingness to lend of the private commercial lenders serving the students at a particular institution. As a measure of such willingness GSLRATIO has strengths and weaknesses. If only home-town lenders are willing to lend to students, then GSLRATIO is an adequate measure only if students at a particular institution come from the region of the state (as defined in Chapter III) in which the institution is located. For the 29 community colleges and several private colleges catering primarily to commuters, this assumption is certainly fair. It is not reasonable, however, in the case of undergraduates at the University of Michigan–Ann

Arbor or at Michigan State University. As far as other residential colleges and universities are concerned, we can expect that they will vary in the proportion of students—resident and nonresident—who come from the surrounding region; the adequacy of GSLRATIO for those institutions is uncertain. A factor encouraging the use of this measure, however, lies in reports that in some areas with a high GSLRATIO private lenders have been willing to make loans to students attending local institutions even when their home towns were in other parts of the state.

Results

Taken together these eight variables explain 38.3 percent of the variation in borrowing rates among 81 colleges and universities.[8] Considering the partial R^2 statistics of the last column in Table 13, we see that the two most important explanatory variables were GIFTAID and GSLRATIO. If we were to treat this collection of schools as a sample, then these are the only variables which are significant at the 5 percent level or better.

The positive sign of the coefficient of GIFTAID is contrary to our expectation. A possible explanation for this would be that as the costs of higher education have risen aid from grants and scholarships has not kept pace. Students must supplement gift aid with loans. Such a complementary relationship would be compatible with the current pattern of packaging financial aid to include a mix of grant aid and self-help opportunities, such as loans and employment.

The negative sign of the coefficient of SOFTLOANS is at least compatible with our expectation that NDSL and institutional loans would be preferred substitutes for Guaranteed Loans. The proportion of graduate students and the default rate have very little explanatory power, although the signs of the coefficients indicate that the direction of both is consistent with our hypotheses. All other things being equal, four-year colleges had higher borrowing rates; and, contrary to our hypotheses, when other factors were taken into account, a college's being private had a negative effect on the borrowing rate.

The strength of the GSLRATIO is surprising, given the reservations expressed above. Because 24 of the colleges studied are located in the Detroit SMSA, which has an extremely low value for GSLRATIO, another regression equation was estimated in which there was added a dummy variable having the value of 1 for

schools located in the Detroit SMSA. As can be seen in Table 14 this procedure improved the predictive power of the estimating equation slightly and at the same time substantially reduced the explanatory power of GSLRATIO by itself, although GSLRATIO remained highly significant. The explanatory power of PRIVATE was reduced slightly by this procedure, and that of FOURYEAR increased slightly, although neither has much predictive strength in either regression equation.

As a further check on the validity of GSLRATIO a regression was run for the 29 community colleges alone. GSLRATIO was the only statistically significant variable, but its explanatory power as measured by the Partial R^2 remained close to .25. (See Appendix Table A.5.) It is also of interest that the sign of GIFTAID is negative for community colleges, but when the same regression was run for the private colleges and public four-year colleges alone the sign of GIFTAID was positive. (See Appendix Table A.6.) A possible explanation for the difference would be that community college students need less aid in total, and therefore a single form of aid will suffice. Students at four-year institutions and private colleges, on the other hand, may need aid from more than one program. The Survey of Undergraduate Financial Aid disclosed that per capita aid from all sources was $653 at public four-year colleges and universities, $237 at public community colleges, and $938 at independent colleges and universities.[9]

On the whole one would have to conclude that our measure of regional willingness to lend is strongly associated with the rate of Guaranteed Loan borrowing observed at the several colleges and universities within the state even when many other factors are taken into account. Indeed where many other factors would be expected to exert a strong influence, GSLRATIO seems to be the strongest single influence on actual borrowing under the Guaranteed Loan Program. It would also seem to be true that, although students from the Detroit Metropolitan Area may have a particularly serious problem in obtaining Guaranteed Loans from private lenders, variations in lender participation significantly affect students at colleges and universities throughout the state.

Changes in Borrowing Rates, 1971–72 to 1974–75

Another line of inquiry concerns the behavior of the borrowing rates at these colleges and universities during the period 1971–72 through 1974–75. In what was obviously a period of tight money

Table 14

ANALYSIS OF THE EFFECT OF DETROIT SMSA LOCATION ON RATES OF STUDENT BORROWING FROM PRIVATE LENDERS, 1974–75

Variable	Partial Correlation Coefficient (*R*)	Regression Coefficient	Standard Error	*t*-Statistic	Significance Level	Partial R^2
Constant	...	7.26	19.24	.377	.707	...
Detroit	−.175	−23.01	15.32	−1.502	.138	.031
PRIVATE	−.123	−14.41	13.78	−1.045	.299	.015
FOURYEAR	.182	19.49	12.53	1.555	.124	.033
GIFTAID	.319	.06	.02	2.840	.006	.102
SOFTLOANS	−.049	−.03	.07	−.413	.681	.002
PCNEEDY	−.098	−.54	.64	−.827	.411	.010
GSLRATIO	.266	24.85	10.68	2.327	.023	.071
GRADS	.106	33.93	37.70	.900	.371	.011
DEFAULTS	−.065	−33.83	61.49	.550	.584	.004

Least Squares Regression Analysis of Variance of Borrowing Rate = Loans per Thousand Students N = 81 out of 82

Source	Degrees of Freedom	Sum of Squares	Mean Square	*F*-Statistic	Significance Level
Regression	9	74616.	8290.6	5.3031	.0000
Error	71	.11100 +6	1563.4		
Total	80	.18561 +6			

Multiple R = .63403 R-Square = .40199 Standard Error = 39.539

Note: GIFTAID = scholarship and grant aid received by undergraduates from all sources, divided by full-time undergraduates for fall 1974; SOFTLOANS = National Direct Student Loan Fund money available for new loans to undergraduates for 1974–75, divided by number of full-time undergraduates; PCNEEDY = number of applicants for financial aid 1974–75 expected to be found eligible under standard measures of need, divided by full-time undergraduate enrollment; GSLRATIO = 1974–75 ratio of Guaranteed Student Loan rate (per 1,000 potential borrowers) for private lenders in school's region to state-wide GSL average rate as derived in Chap. III.
Sources: See Appendix Table A.4 for data Sources.

markets, did the observed changes in borrowing rates at various schools conform to the hypotheses set forth in Chapter II? To answer this question a linear regression equation was estimated to assess the strength of several variables in predicting the percentage decrease in the borrowing rates at the colleges and universities studied. The dependent variable PCDROP equals the 1971–72 borrowing rate for all students at each institution minus that for 1974–75, divided by the 1971–72 rate. Since almost all the schools studied had a fall in lending between these dates and therefore have positive values of PCDROP, a negative coefficient on one of the independent regression variables is associated with a smaller decline in institutional borrowing rates.

Results

Table 15 shows the regression results.[10] The seven variables are able to explain 31.7 percent of the variation in PCDROP. While the default rate was of negligible value in predicting the overall level of borrowing in 1974–75, the variable DEFAULT improved the explanatory power of the estimating equation by more than 5 percent, and with a high level of significance. High default rates did have a negative effect on students' ability to borrow from private commercial lenders.

Two other variables which had little importance in predicting the overall level of borrowing at a school in 1974–75 were important influences on the change in their borrowing rates. PRIVATE and GRADS both acted as a brake on the decrease in lending, as we would expect from the observations found in Chapter III. There are two possible ways of interpreting these findings, either as an improvement in access to loans or as reflecting an increase in "need" and thus in demand for loans by students at institutions having these characteristics. In the case of the variable GRADS it seems most likely that an increase in need by graduate students would have been the dominant factor, but the picture is not entirely clear.

Of the 80 colleges and universities in the regression sample only 8 had 10 percent or more graduate students in their full-time enrollments. The private schools among these were Andrews University, the University of Detroit, Merrill-Palmer Institute, and Cranbrook Academy. The publicly supported universities among them were Michigan State University, Oakland University, The University of Michigan–Ann Arbor, and Wayne State University.

Table 15

ANALYSIS OF EFFECT OF VARIABLES ON THE DECREASE IN RATES OF BORROWING AT MICHIGAN COLLEGES AND UNIVERSITIES 1971–72 TO 1974–75

Variable	Partial Correlation Coefficient (*R*)	Regression Coefficient	Standard Error	*t*-Statistic	Significance Level	Partial R^2
Constant	...	.509	.195	2.607	.011	...
PRIVATE	−.208	−.313	.174	−1.802	.076	.043
FOURYEAR	.068	.093	.160	.579	.564	.004
GIFTAID	.142	.000	.000	1.213	.229	.020
SOFTLOANS	−.298	−.002	.001	−2.651	.010	.089
GSLRATIO	−.189	−.153	.094	−1.631	.107	.036
GRADS	−.269	1.132	.477	2.372	.020	.073
DEFAULTS	.229	1.560	.780	1.999	.049	.053

Least Squares Regression Analysis of Variance of PCDROP N = 80 out of 82

Source	Degrees of Freedom	Sum of Squares	Mean Square	*F*-Statistic	Significance Level
Regression	7	8.418	1.2025	4.7722	.0002
Error	72	18.143	.25198		
Total	79	26.560			

Multiple R = .56296 R-Square = .31692 Standard Error = .50198

Note: GIFTAID = scholarship and grant aid received by undergraduates from all sources, divided by full-time undergraduates for fall 1974; SOFTLOANS = National Direct Student Loan Fund money available for new loans to undergraduates for 1974–75, divided by number of full-time undergraduates; GSLRATIO = 1974–75 ratio of Guaranteed Student Loan rate (per 1,000 potential borrowers) for private lenders in the school's region to statewide GSL average rate, as derived in Chapter III; PCDROP = 1971–72 rate of borrowing for institution minus same rate for 1974–75, divided by 1971–72 rate.

Sources: See Appendix Table A.4 for data sources.

Five of the eight are in the Detroit SMSA, where, as we saw in Table 10, the regional borrowing ratio was very low all along. In fact, as Table 16 shows, in contrast to the situation in which we tried to predict borrowing rates for a single year, the addition of a separate DETROIT variable to the variables of Table 15 increases the predictive value of the regression equation by less than two-tenths of 1 percent. It appears that being in Detroit did not contribute to the decrease in an institution's borrowing rate. (A possible inference is that the lending rates for Detroit were already so low in 1971–72 that they couldn't get much lower.)

A sixth institution with a high proportion of graduate students is the University of Michigan–Ann Arbor, which experienced virtually no change in its students' borrowing from private sources. As the state's leading graduate institution it was probably most vulnerable to the decrease in funding of graduate students, which should be reflected in its rate of Guaranteed Student Loan borrowing. However, in the absence of a breakdown of the institution's loans by graduate and undergraduate levels, there is no way to tell in what proportions the loans from private lenders went to graduates and undergraduates during this period. It is quite possible that graduate students did not receive a greater share of loans during this period, for of all the colleges and universities in the state the University of Michigan–Ann Arbor would be the most likely to have students whose families' credit ratings met the criteria for favorable treatment set forth in Chapter II.

As for the variable PRIVATE, it is not obvious that its negative effect on the size of PCDROP indicates greater need among private school students. Although the tuition and fees are much higher at private institutions than at their public counterparts, the rate of increase was about the same for public and private four-year institutions in this period.[11] The absolute change was greater for private schools, of course; but an equally likely explanation for the negative effect of PRIVATE is that it reflects not so much an increase in relative need as the relative credit-worthiness of private school students. By this we refer not just to their default record but to the likelihood that they come from families with higher credit ratings and better banking connections than those of the community college or vocational students whom they replaced.

The low level of the explanatory power of FOURYEAR is not surprising when GRADS and PRIVATE are already being used. (Most of the private schools are four-year institutions.) As we noticed in Chapter III, the four-year public colleges experienced a drop in borrowing rates while the private colleges had an increase, and thus the two groups probably canceled each other out.

Table 16

ANALYSIS OF EFFECT OF INSTITUTION'S DETROIT SMSA LOCATION ON STUDENT BORROWING FROM PRIVATE LENDERS, 1971–72 TO 1974–75

Variable	Partial Correlation Coefficient (*R*)	Regression Coefficient	Standard Error	*t*-Statistic	Significance Level	Partial R^2
Constant	...	.560	.2456	2.279	.026	...
Detroit	−.041	−.068	.1970	−.346	.730	.002
PRIVATE	−.202	−.307	.1755	−1.747	.085	.041
FOURYEAR	.071	.097	.1614	.603	.549	.005
GIFTAID	.139	.000	.0003	1.185	.240	.019
SOFTLOANS	−.292	.002	.0009	−2.576	.012	.085
GSLRATIO	−.161	−.187	.1363	−1.371	.174	.026
GRADS	−.266	−1.120	.4816	−2.325	.023	.071
DEFAULTS	.232	1.587	.7888	2.012	.048	.054

Least Squares Regression Analysis of Variance of PCDROP N = 80 out of 82

Source	Degrees of Freedom	Sum of Squares	Mean Square	*F*-Statistic	Significance Level
Regression	8	8.4480	1.0560	4.1396	.0004
Error	71	18.112	.25510		
Total	79	26.560			

Multiple R = .56398 R-Square = .31807 Standard Error = .50507

Note: GIFTAID = scholarship and grant aid received by undergraduates from all sources, divided by full-time undergraduates for fall 1974; SOFTLOANS = National Direct Student Loan Fund money available for new loans to undergraduates for 1974–75, divided by number of full-time undergraduates; GSLRATIO = 1974–75 ratio of Guaranteed Student Loan rate (per 1,000 potential borrowers) for private lenders in a school's region to statewide GSL average rate, as derived in Chap. III; PCDROP = 1971–72 rate of borrowing for institution minus same rate for 1974–75, divided by 1971–72 rate.

Sources: See Appendix Table A.4 for data sources.

The variable GSLRATIO is not a powerful predictor of PCDROP, but its sign does indicate that colleges located in areas of the state where lenders were favorably disposed to the Guaranteed Loan Program experienced smaller decreases in their borrowing rates than other institutions.

Finally there are GIFTAID and SOFTLOANS, whose roles are reversed from those observed in the regressions predicting total borrowing rates for 1974–75. Certainly neither is the measure of choice for determining the extent that other forms of financial aid explain the rate changes of Guaranteed Loan borrowing. The appropriate measures would be the changes rather than the levels of grant aid and other forms of loans. Their signs indicate that a high level of GIFTAID is associated with a large decrease in Guaranteed Loan borrowing, whereas a high level of SOFTLOANS led to a small decrease in GSL borrowing. A possible explanation for the difference may lie in the different sources of funding for GIFTAID and SOFTLOANS. Grants and scholarships may come from a variety of sources, including the institution's internal funds, but a high level of SOFTLOANS usually indicates a well-developed NDSL program and participation in the other parts of the Federal Tri-Partite Program, namely College Work-Study and Special Educational Opportunity Grants. In turn, this participation probably indicates a financial aid office developed fully to handle effectively the paper work required for the GSLP loan processing and needs analysis after 1972.

On the whole then, it would appear that private colleges, institutions with larger percentages of graduate students, and those with well-developed financial aid programs were most able to stem the cutbacks in Guaranteed Student Loan participation by private commercial firms after 1971–72. It also appears that private commercial lenders adjusted their credit allocations in response to institutional default rates in a manner consistent with the hypotheses of Chapter II. In other words, although the evidence of Table 11 (Chapter III) suggests that the overall lending rates within regions of the state were not directly related to the default experience of the private lenders, within given levels of participation in the Guaranteed Loan Program, lenders do seem to have adjusted their distribution of student credit to favor those from educational institutions with lower default rates.

NOTES

1. Michigan Department of Education, Student Financial Assistance Services, *Summary of In-State Tuition and Fees, and Room and Board Charges at Michigan Colleges and Universities between 1964–65 and 1976–77 Academic Years* (Lansing, 1976), pp. 5, 11, 1.
2. ———, *Summary of 1973–74 Fiscal Operations Reports and 1975–76 Tri-Partite Applications* (Lansing, 1976), p. 13. Public two-year colleges had the highest proportion of (Tri-Partite Program) aid recipients at the lowest gross income level, and the highest concentration of independent students.
3. The Committee on House Resolution 11.
4. For specific sources see Appendix Table A.4.
5. The regressions presented in this chapter were obtained by using the REGRESSION command in the University of Michigan MIDAS program. A linear additive form was employed in the absence of any evidence that an alternative form would be preferable.
6. Michigan House of Representatives, Committee on House Resolution 11, *The State of Michigan Undergraduate Financial Aid Survey, Final Report* (Lansing, 1976) pp. 10–12.
7. The regional location of the institutions studied is given in Appendix Table A.2.
8. No default rate was available for Muskegon Business College; it was automatically excluded from the estimating equation.
9. *Financial Aid Survey*, p. 31. These figures are based on full-time equivalent enrollments.
10. Excludes Muskegon Business College and the College for Art and Design; the latter had no loans in 1971–72.
11. *Summary of In-State Tuition and Fees*, pp. 1, 5.

V

THE SCHOOL AS LENDER OF LAST RESORT

In Chapter III we noted the increase in loans by educational institutions to their own students. Some major institutions in the state have become "lenders of last resort" to students who are unable to obtain loans from private lenders in their home towns. More recently the state of Michigan assumed this role for all students in the state by the establishment of a direct loan program. Through Michigan Department of Education data it was possible to study all the loans obtained by students at one major university in the state for the fiscal year 1974–75 and to compare the characteristics of student borrowers classified on the basis of the source of their loans.[1] We shall consider in turn the effect of graduate versus undergraduate student status, family income, race, and region of residence on the ability of students to borrow from private commercial lenders.

Graduate versus Undergraduate Student Status

Table 17 shows the distribution of student borrowers by source of loan and academic level. We note that freshmen were most likely to borrow from a private lender and graduate students least likely. The former statistic is consistent with our observation in Table 4 (Chapter III) concerning the statewide distribution of loans by grade level. The greater dependence of graduate students on their university as lender is consistent with our expectations as set forth in Chapter II and our findings in Chapter III. Since they are more likely to be financially independent of

their parents, graduate students are less able to borrow on the strength of a parental credit history, and, as we shall see below, their own incomes are much lower than the family incomes of other student borrowers.

Table 17

DISTRIBUTION OF SOURCES OF LOAN, BY ACADEMIC LEVEL, AT ONE UNIVERSITY IN MICHIGAN, 1974–75

	Number		Percentage	
Level	University	Private	University	Private
Freshman	99	263	27.3	72.7
Sophomore	217	381	36.3	63.7
Junior	299	530	36.1	63.9
Senior	305	567	35.0	65.0
All undergraduates	920	1,741	34.6	65.4
Grad I	179	143	55.6	44.4
Grad II	111	101	52.4	47.6
Grad III	54	58	48.2	51.8
Grad IV	35	27	56.5	43.5
All graduates	379	329	53.6	46.4
Other	36	53	40.4	59.6
Total	1,335	2,123	38.6	61.4

Source: Derived from data supplied by the Michigan Department of Education.

Undergraduates who borrowed from private lenders borrowed slightly more money per capita than students borrowing from the university;[2] $1,256 was the mean for private loans, compared with $1,209 for school loans. Graduate students borrowed more per capita from both sources than did undergraduates—a mean of $1,475 from the university and $1,420 from private lenders; however the difference in these two means was not statistically significant.

Family income

Table 18 shows the distribution of adjusted gross incomes of borrowers' families by academic level and source of loan. It is readily apparent that within each category borrowers from the university had much lower incomes.[3] Similar differences existed for the measure Adjusted Family Income, the criterion used to determine eligibility for the interest subsidy while the student is in school. Probably the most interesting fact shown in Table 18 is

Table 18

MEAN ADJUSTED GROSS INCOME OF BORROWERS AT ONE UNIVERSITY IN MICHIGAN BY ACADEMIC LEVEL AND SOURCE OF LOAN

	Source of Loan	
Academic Level	University	Private
Undergraduate	$10,879	$15,916
Graduate	7,159	10,449
All Borrowers	9,714	14,936

Source: Derived from data supplied by Michigan Department of Education.

that graduate students who borrowed from private lenders had a lower mean income than undergraduates who resorted to the university. It is, of course, likely that some of these graduate students were able to rely on parental banking connections. It is also true, as will be seen below, that fewer graduate student borrowers are members of minority groups.

Race

The basic facts about the distribution of loan sources for members of minority groups are shown in Table 19. The most striking of these is that, whereas better than two-thirds of the "Other" students at this university were able to obtain private loans, only one-third of the black students, and fewer than 20 percent of the Spanish surname students were able to do so. Looking at the columns for the Detroit metropolitan area we find that these proportions held even more distinctly. Because 38.7 percent of the minority students came from the Detroit area, the data for that region were further broken down by county, as shown in Table 20. There we can see that students from Wayne and Oakland counties were more dependent on university loans and that in both cases for minority students the reversal of the proportions found for "Other" students, noted in Table 19, continued undiminished.

Looking for possible explanations of this situation, I determined the distribution of minority students among graduate and undergraduate borrowers and then examined the mean income of minority students.[4] In Table 21 we see that the observations of Tables 19 and 20 persist as far as minority student reliance on the university for loans is concerned. In fact we see that for minority group borrowers graduate students are even less able to secure private loans than are undergraduates.

Table 19

DISTRIBUTION OF SOURCES OF LOAN, BY RACE, FOR BORROWERS AT ONE UNIVERSITY IN MICHIGAN, 1974–75

Race	Sources for All Borrowers*		Sources for Detroit SMSA Residents	
	School	Private	School	Private
Black	368	163	163	61
Native American	4	3	...	...
Oriental	8	11	...	3
Spanish Surname	41	10	6	2
Other	847	1,801	188	359
Not Identified	67	135	...	...
Total	1,335	2,124	357	425
	Percentage Distribution (Row Percents)			
Black	69.3	30.7	72.8	27.2
Native American	57.1	42.9	...	...
Oriental	42.1	57.9	...	100.0
Spanish Surname	80.4	19.6	75.0	25.0
Other	32.0	68.0	34.4	65.6

*For all borrowers: Chi-square statistic = 298.07; N = 3,256; degrees of freedom = 5; significance level = 0.0.

Source: Derived from data supplied by the Michigan Department of Education.

Table 20

DISTRIBUTION, BY RACE, OF SOURCES OF LOAN FOR DETROIT SMSA RESIDENT BORROWERS AT ONE UNIVERSITY IN MICHIGAN, 1974–75

Race	County of Residence					
	Macomb		Oakland		Wayne	
	School	Private	School	Private	School	Private
Black	2	5	19	3	142	53
Native American	...	...	...	...	...	...
Oriental	...	2	...	1	...	...
Spanish Surname	1	...	2	...	3	2
Other	29	64	98	147	61	148
Not Identified	...	6	8	11	9	12
Total	32	77	127	162	215	215
	Percentage Distribution (Row Percents)					
Black	28.6	71.4	86.4	13.6	72.8	27.2
Native American	...	...	...	...	...	...
Oriental	...	...	...	...	...	...
Spanish Surname	...	...	...	...	...	...
Other	31.2	68.8	40.0	60.0	2[illegible].2	70.8
All Borrowers in County:	29.4	70.6	43.9	56.1	50.0	50.0

Source: Derived from data supplied by the Michigan Department of Education.

Table 21

DISTRIBUTION OF LOAN SOURCES BY RACE AND ACADEMIC LEVEL OF BORROWERS AT ONE UNIVERSITY IN MICHIGAN

	University Lender	Private Lender
Undergraduates		
Minority	306	152
Row percentage	(66.8)	(33.2)
Nonminority	614	1,589
Row percentage	(27.9)	(72.1)
Graduates		
Minority	115	35
Row percentage	(76.7)	(23.3)
Nonminority	300	346
Row percentage	(46.4)	(53.6)

Source: Derived from data supplied by the Michigan Department of Education.

The most likely explanation of the difference in access to private commercial loans is the lower family income of minority group students. As Table 22 shows, there was a substantial difference between the mean incomes of borrowers from private lenders, both minority and nonminority, and of borrowers from the university. Furthermore, the mean income of minority borrowers from the university is only $7,696, the lowest of the four categories—minority and nonminority borrowers from the university and minority and nonminority borrowers from private lenders.[5]

Table 22

MEAN ADJUSTED GROSS INCOME OF MINORITY AND NONMINORITY STUDENT BORROWERS AT ONE UNIVERSITY IN MICHIGAN, BY SOURCE OF LOAN

	University Lender	Private Lender
Minority	$ 7,696	$12,134
Nonminority	10,670	15,215
All Borrowers	9,714	14,936

Source: Derived from data supplied by the Michigan Department of Education.

Throughout this study little attention has been paid to the amount borrowed, since it seemed to have little impact on the problem of access. This impression is confirmed once again when we examine the amount borrowed by minority and nonminority students. Minority students borrowed a mean of $1,210 regardless of lender. "Other" students borrowed more than minority students, regardless of lender, receiving a mean loan of $1,330 from

the university and a mean of $1,292 from private lenders. (The difference between the latter means is not statistically significant.) Graduate students from the "Other" group probably had a greater need to rely on the Guaranteed Loan Program. The smaller amount borrowed by minority students might be explained by their lower family incomes, which should have made them eligible for other forms of financial aid. Since in the case of such eligibility the Guaranteed Loans would be supplementing Basic Opportunity Grants, National Direct Student Loans (NDSL), and Work/Study, a smaller Guaranteed Loan might be needed.

Region

The Guaranteed Student Loan Ratios (GSLRATIO) of Table 10 (regional ratios) were assigned to the county of residence of each student borrower at the university in question. For borrowers from private firms the mean value of this ratio was 1.22; for borrowers from the university, the mean value was .72. The difference was significant at the 0.0 level.[6] Similar differences prevailed when the borrowers were divided into graduate and undergraduate categories.

As a further test, the proportion of all students and of minority students borrowing from private lenders was calculated for the several regions of the state. These statistics are shown in Table 23 along with the 1974–75 value of GSLRATIO for each region. The simple correlation coefficient (R^2) between GSLRATIO and the proportion of borrowers from private firms was .7796, which was significant at the .01 level. The correlation between the GSLRATIO and the percentage of minority students who were able to borrow from private firms was .6296, which was also significant at the .01 level. However when four cases with either no loans or only one loan were removed, the correlation coefficient fell to .3828, which was not significant at the .05 level.

Conclusion

It seems evident that poorer students and graduate and minority students—in part because they are poorer—are at a serious disadvantage in attempting to borrow from private lenders. It also seems true that the regional willingness to lend of private firms plays a particularly important role in determining access to

Table 23

RELATION OF REGIONAL GSLRATIO VALUES TO PERCENTAGE OF STUDENTS BORROWING FROM PRIVATE LENDERS FOR ONE UNIVERSITY IN MICHIGAN

Region of Student's Residence	Percentage Borrowing from Private Lenders		Regional GSLRATIO (1975)
	All Students	Minority Students	
Detroit	54.8	28.1	.47
Ann Arbor	70.4	0.0	1.34
Bay City	94.4	100.0*	1.18
Flint	93.2	77.3	2.09
Grand Rapids	90.6	69.2	1.53
Jackson	69.0	50.0	.47
Kalamazoo	83.3	100.0*	2.13
Lansing	33.3	13.1	.66
Muskegon	86.1	75.0	1.10
Saginaw	82.0	46.2	1.54
Toledo (Monroe County)	29.4	. . . †	.03
Upper Peninsula	94.0	100.0*	2.20
Lower Peninsula—North	80.4	50.0	1.71
Lower Peninsula—West	84.1	78.9	1.16
Lower Peninsula—Central	85.8	66.7	1.84
Lower Peninsula—East	84.1	80.0	1.08

*Only one minority student borrower.

†No minority student borrowers from any source were from this region.

credit. Within Michigan the low level of participation of Detroit metropolitan area banks in the Guaranteed Student Loan Program was a particular impediment to students from that area.

In assessing these findings on student borrowers at this one postsecondary educational institution it should be remembered that as a graduate university it had a relatively low default rate and otherwise fitted the class which—as we saw in Chapter IV—was best able to offset the decline in lending from 1971–72 to 1974–75. If banks were lending at all then this institution's students were likely to have been at the upper end of the list of prospects. If a third of this school's students were unable to secure loans from private lenders it is likely that even higher proportions of eligible borrowers at other schools were denied credit.

NOTES

1. The Michigan Department of Education transcribed a copy of its loan records (minus names, addresses, and identification numbers) for all borrowers at one university in the state during the fiscal year 1974–75. Charles Buckborough of

the Department of Education did the programing to obtain the copy of the loan files; Thomas Wilkinson of the staff of the Sociology Department at the University of Michigan did the programing necessary to develop a file for use in the MIDAS System at the University of Michigan. The writer is most grateful for both gentlemen's assistance.

2. The T-Statistic showed that the difference in means was significant at the .004 level. The Mann-Whitney U Test for differences in population distribution was significant at the .03 level.
3. Within each category—undergraduates, graduates, and all borrowers—the Mann-Whitney U test was significant at the level of 0. or .0000.
4. In order to simplify the presentation of data, all black, Oriental, Spanish-surname, and Native American students were grouped together as "minority" students. All unidentified students were assumed to be "Other," since their borrowing pattern matched that category.
5. For both minority and nonminority students the Mann-Whitney U test for differences in the distribution of incomes of borrowers from the university and borrowers from private firms was significant at levels of .0000 or better.
6. Both Student's T and the Mann-Whitney U test were significant at level 0.0.

VI

CONCLUSIONS AND POLICY CONSIDERATIONS

This study has analyzed *ex post* information about successful applicants for Guaranteed Student Loans in order to determine which students were likely to be able to borrow from private lenders. Three sets of data have been examined: performance of lenders in various regions of the state, the experience of the state's colleges and universities, and the experience of students at one school which acted as a lender of last resort for its own students.

Although the data have some limitations they do support the following conclusions about access to loans from private lenders in the years 1971–72 through 1974–75.

1. Even in the peak year of the program's operation (1971–72) there were substantial differences between the regions of the state in access to guaranteed student loans.

2. Differences in the regional availability of loans exhibited no consistent relationship to the default experience of lenders within regions.

   Participation in the Guaranteed Student Loan Program would appear to have been related more directly to money market structure in the individual region. Important factors probably included the degree of competition within each market, lenders' perceptions of potentially profitable outlets for funds, and the "public service" philosophies of the officers and directors of individual banks.

3. Within the limits set by competitive conditions within regions, banks do appear to have altered their rationing

formulas between 1971–72 and 1974–75 to favor borrowers from private schools, from universities with a high percentage of graduate students, and from those institutions with relatively low default rates.

4. In 1974–75 and probably throughout the 1971–75 period, eligible students at any given college or university found that their chances of securing private loans were greater the higher their family's income, and that such chances were lowered significantly for members of a minority group or graduate students. Furthermore students with similar characteristics faced widely divergent conditions of access to Guaranteed Loans within the several regions of the state.

   In the absence of a lender of last resort, many members of these groups (or residents of given regions) found that they were unable to obtain financial aid for which they were otherwise eligible.

Policy Implications of the Study

It seems clear from the findings summarized above that if the state of Michigan wished to ensure access to loans to all students who were eligible to borrow under the Guaranteed Student Loan Program, it had to take direct action in the student loan market. There were two possible courses of action: either the state could try to increase the participation of private lenders in the program or it could become a lender of last resort for those not served by private lenders. The state chose to follow the latter course and instituted its Direct Loan Program.

In retrospect, perhaps the choice was inevitable. Given the limits which the federal government imposed on its own participation, state efforts to increase participation by private lenders would have cost the state money—either directly for subsidies to lenders or indirectly for increased services to them. On the other hand, by raising initial loan funds through revenue bonds and then selling the loans to Sallie Mae, the state could develop a substantial direct lending program with little if any initial expense to its treasury. And of course, considering the great disparities between the regions of the state as to access to loans, it is quite possible that the price required to induce relatively easy access to bank loans in some areas, particularly Detroit, might have been quite high.[1]

Risks in state program

Becoming a direct lender—or lender of last resort—is not a riskless action, however. In the first place, if lenders have been participating in the program as a "service," a loss-leader, or as part of a tied-in sale, it is likely that the availability of an alternative source of Guaranteed Loans would reduce the value of such services to customers, and thus reduce the lenders' returns from participation in the program. If this were the case, then the primary attraction to lenders would have to be the direct net monetary returns from loans, and their continued participation would require an improvement in those terms.

Until the passage of the Higher Education Amendments of 1976, State Guarantee Agencies were offered 80 percent federal reinsurance of their losses from most defaults. The balance had to be paid from insurance fees charged to borrowers. The state of Michigan operated its program from those fees. Unlike the federal government, the state did not have to pay its own money for defaulted loans. Under the Higher Education Amendments of 1976, however, state agencies may receive 100 percent federal reinsurance, provided that their default rate is below 5 percent and their conditions of access to loans are not more restrictive than those of FISL.[2] Whatever we can conclude from the evidence of this study, it is certainly safe to say that the students borrowing from the Direct Loan Program will not be *better* risks than those previously served. To the extent that commercial lenders have been acting as a buffer, screening out the poorer risks within their regions, the State Direct Loan Program is likely to have a default rate higher than that of the previous Guarantee Program. Given the long gestation period of GSLP defaults, one can only hope that the cheaper alternative aid program will not prove as expensive to the state of Michigan as it has proved to be for the U.S. government.

Policies on default risk

At both the federal and state levels there appears to be an assumption that the risk of default can be kept to acceptable levels by administrative practices which do not, at the same time, involve any sorting or selecting for risk of default. The procedures required for schools in Michigan to participate in the direct loan program are primarily concerned with ensuring that the borrowers

are bona fide students, that the school sends any changes in their status or address to Lansing, and that the students realize that they are borrowing money which is supposed to be repaid. There is certainly no question that sound administrative practices can substantially reduce the incidence of default—the difference between the FISL Program and the Guarantee Agencies' record is evidence on that score. What is questionable is whether one can expect low default rates in a program where loans to finance an investment are freely made solely on the basis of economic need rather than on the basis of prospective returns to that investment.

Accepting Johnstone's estimates as cited in Chapter I—a cost of $41 per $100, of which $8.19 is the estimated cost of defaults—we see that the Guaranteed Loan Program is far from costless and that the major element in the cost is *not* the default rate. It therefore seems questionable to rely on growth of the Guaranteed Loan Program in its present form as a major vehicle for student aid. Yet in Michigan, with the beginning of the Direct Lending Program, and nationally, as Sallie Mae expands its activities to service more open-door lenders, we seem to be poised on the threshold of just such an expansion. The usual argument for keeping an open door to Guaranteed Loans has been that the worst of the default problems come from the failures of other aid programs—i.e., the lack of sufficient grant and soft loan aid to keep Guaranteed Loans for middle-income students. Yet it is quite evident that the operation of a lender of last resort increases GSLP lending to students with significantly lower family incomes.

And so we conclude with one more dilemma in financing higher education. The Guaranteed Loan Program is the one open-ended source of general financial aid; and our findings on regional variations in lender participation indicate quite clearly that a state government concerned about equality of access to Guaranteed Loans may have little choice but to operate a back-up lending program. Yet that very act also increases the likelihood that there will be an increase in lending to students in income brackets for which the program was not designed, and whose potential default rate is consequently likely to undermine the operation of the program.

Suggestions for Further Study

As with many empirical studies, there are undoubtedly grounds for quarreling with the findings of this one. But of all the conclusions

derived herein, the sturdiest would seem to be the one concerning regional differences in access to loans. Taking this as given, a more detailed investigation of the relationship between loan availability and the history of loans made within different regions might prove quite interesting. This study did not examine the loans made by particular lenders within regions. Thus, although we know that more community college students obtained loans in areas with high values of GSLRATIO, we do not know that "open-door" lenders loaned more to community college students than did more restrictive lenders. Nor do we know whether open-door lenders had better or worse default experiences with students categorized by any one given set of characteristics.

Since administrative practices are the principal instrument employed to control defaults under the new Direct Loan Program, it would also be of interest to study the relative effectiveness of various practices in deterring default and, further, to compare their value with that of more conventional credit-screening devices for individual applicants.

There is no question that if resources were available it would be extremely useful to have the benefit of several years' consistent data on institutional financial aid, such as was gathered for the *Survey of Undergraduate Financial Aid*. Better yet would be longitudinal data on individual students. Certainly one of the urgent questions for the future concerns the overall packaging of aid for the four-to-eight years of undergraduate and graduate education—and the role of student loans in that package.

NOTES

1. It is interesting to note that the findings of this study are in apparent contradiction to those of a national study of 16 lenders and servicing firms which concluded:

   > Although the banks in larger cities have, by and large, not restricted the funds made available for student loans, many smaller commercial banks and thrift institutions have. (Technology Management, Inc. *Analysis of Student Loan Special Rate Allowances and Servicing Costs*, [Cambridge, Mass., 1974], p. 3.)

2. "GSL Agency Insurance Plan Mixes Incentives with Requirements," *Higher Education Daily*, Oct. 7, 1976, pp. 3, 4.

APPENDIX

Table A.1

COUNTIES INCLUDED WITHIN REGIONAL DIVISIONS OF MICHIGAN

REGION	COUNTIES
SMSA's	
Detroit	Wayne
	Oakland
	Macomb
Ann Arbor	Washtenaw
Bay City	Bay
Flint	Genesee
	Lapeer
Grand Rapids	Kent
	Ottawa
Jackson	Jackson
Kalamazoo	Kalamazoo
Lansing	Clinton
	Eaton
	Ingham
Muskegon	Muskegon
Saginaw	Saginaw
Toledo	Monroe
Non-Smsa's	
Upper Peninsula	Alger
	Baraga
	Chippewa
	Delta
	Dickinson
	Gogebic
	Houghton
	Iron
	Keweenaw
	Luce
	Mackinac
	Marquette
	Menominee
	Ontonagon
	Schoolcraft
Lower Peninsula-North	Alcona
	Alpena
	Antrim
	Arenac
	Benzie
	Charlevoix
	Cheboygan
	Clare
	Crawford
Non-SMSA's (continued)	
Lower Peninsula-North (cont.)	Emmet
	Gladwin
	Grand Traverse
	Iosco
	Isabella
	Kalkaska
	Lake
	Leelanau
	Manistee
	Mason
	Mecosta
	Midland
	Missaukee
	Montmorency
	Newago
	Oceana
	Ogemaw
	Osceola
	Oscoda
	Otsego
	Presque Isle
	Roscommon
	Wexford
Lower Peninsula-West	Allegan
	Barry
	Berrien
	Branch
	Calhoun
	Cass
	St. Joseph
	Van Buren
Lower Peninsula-Central	Gratiot
	Hillsdale
	Ionia
	Lenawee
	Livingston
	Montcalm
	Shiawassee
Lower Peninsula-East	Huron
	Saint Clair
	Sanilac
	Tuscola

Table A.2

COLLEGES AND UNIVERSITIES WITHIN REGIONS

Region	Community	Public 4-Year	Private
Detroit	Henry Ford	Oakland Univ.	Detroit Coll. of Business
	Highland Park	UM—Dearborn	Detroit Inst. of Technology
	Macomb County	Wayne State Univ.	Lawrence Inst. of Technology
	Oakland County		Madonna College
	Schoolcraft		Marygrove College
	Wayne County		Mercy College Shaw College College for Art & Design Univ. of Detroit Merrill-Palmer Institute Walsh Coll. of Acctg. & Bus. Ad. Cranbrook Academy Detroit Bible Coll. Sacred Heart Sem. Mich. Christian Jr. College
Ann Arbor	Washtenaw County	Eastern Mich. UM—Ann Arbor	Cleary College
Bay City	Delta	Saginaw Valley College	
Flint	C.S. Mott	UM—Flint	General Motors Institute
Grand Rapids	Grand Rapids Jr. College	Grand Valley State Coll.	Aquinas College Calvin College Grace Bible Coll. Grand Rapids Baptist Coll. & Seminary Hope College Reformed Bible College
Jackson	Jackson		Spring Arbor Coll.
Kalamazoo	Kalamazoo Valley	Western Mich.	Kalamazoo Coll. Nazareth College

Table A.2, *continued*

Region	Community	Public 4-Year	Private
Lansing	Lansing	Michigan State University	Olivet College
Muskegon	Muskegon County		Muskegon Business College
Saginaw			
Toledo (Monroe County)	Monroe County		
Upper Peninsula	Bay de Noc	Lake Superior State Coll.	Suomi College
	Gogebic	Mich. Tech. U.	
		N. Mich. Univ.	
Lower Peninsula-North	Alpena	Central Mich. U.	Northwood Inst.
	Kirtland	Ferris State College	
	Mid-Michigan		
	North Central Michigan		
	NW Michigan		
	West Shore		
Lower Peninsula-West	Glen Oaks		Albion College
	Kellogg		Andrews Univ.
	Lake Michigan		
	Southwestern Michigan		
Lower Peninsula-Central	Montcalm	. . .	Adrian College
			Alma College
			Hillsdale Coll.
			John Wesley Coll. at Owosso
			Siena Heights College
Lower Peninsula-East	St. Clair County		

Table A.3

REGIONAL RATES OF GUARANTEED STUDENT LOAN BORROWING—A COMPARISON OF ESTIMATES FROM BANK AND APPLICANT REPORTS, 1971–72

Region	Number of Loans		Regional GSLRATIO	
	Banks	Applicants	Banks	Applicants
Detroit	4,480	4,929	.47	.48
Ann Arbor	371	480	.92	1.34
Bay City	387	375	1.37	1.24
Flint	2,136	2,069	1.83	1.66
Grand Rapids	1,941	1,933	1.51	1.41
Jackson	183	210	.56	.60
Kalamazoo	1,080	884	2.54	1.95
Lansing	887	869	1.16	1.06
Muskegon	432	445	1.12	1.08
Saginaw	491	431	.93	.77
Toledo (Monroe County)	113	130	.42	.45
Upper Peninsula	1,914	2,017	2.64	2.60
Lower Peninsula—North	2,018	2,198	1.55	1.58
West	1,799	2,055	1.39	1.49
Central	1,278	1,374	1.49	1.51
East	598	671	1.09	1.15
Total	20,108	21,479		

Sources: Michigan Department of Education, Table, "Number of Loans Made by County of Residence," in *Student Financial Aid in Michigan—1971–72*, pp. 20–21. Bank data are estimated from a special computer printout of loans approved by lender (1971–72), which was supplied by the Michigan Department of Education.

Table A.4

DEFINITION OF VARIABLES AND DATA SOURCES

$$\text{GSLRATIO} = \frac{\text{Loans per 1,000 students in region}}{\text{State average rate of loans per 1,000 students}}$$

Sources: See Tables 8–10 (Chapter III) and accompanying text.

$$\text{BORROWING RATE} = \text{LOANS PER 1,000 FULL-TIME STUDENTS} = \frac{\text{LOANS from Private Firms in Year i}}{\text{Enrollment of Full-Time Students in Fall of that year}}$$

Sources:

Loans by institution—

Michigan Department of Education, Office of Student Financial Assistance Services, *Annual Report* 1971–72, pp. 15–17; 1972–73, pp. 14–16; 1973–74, pp. 17–19; 1974–75, pp. 22–24.

Table A.4, *continued*

Enrollments—

Fall 1971—unpublished tables from Michigan Department of Education, Division of Higher Education Management.

Fall 1972—, Michigan Department of Education, Division of Higher Education Management, *Advising on the Program Offerings and Services of Michigan Colleges and Universities* (Lansing, 1973) pp. 13, 14, 16, 17.

Fall 1973—, Michigan Department of Education, Division of Higher Education Management, *Advising on Postsecondary Enrollment Projections and Manpower Needs 1974–75* (Lansing, 1974) pp. 20–23.

Fall 1974—, Michigan Department of Education, Division of Higher Education Management, *Postsecondary Educational Needs in Michigan*, by James C. Homan (Lansing, 1975) pp. 29, 30.

$$\text{DEFAULTS} = \frac{\text{Cumulative total of defaulting borrowers}}{\text{Cumulative total of mature loans}}$$

Source: Unpublished tables from the Michigan Department of Education, Office of Student Financial Assistance Services. See text page 34.

$$\text{GIFTAID} = \frac{\text{1974–75 Total (\$) Need-based grants from all sources}}{\text{Fall 1974 Full-time undergraduate enrollment}}$$

Sources: Scholarships and grants from unpublished tables from Michigan Undergraduate Financial Aid Survey. Undergraduate enrollments from Michigan Department of Education, Division of Higher Education Management, *Postsecondary Educational Needs in Michigan* (Lansing, 1975), pp. 29, 30, 32.

$$\text{SOFTLOANS} = \frac{\text{1974–75 N.D.S.L. and institutional loans other than F.I.S.L. or G.S.L.P. loans}}{\text{Fall 1974—Full-time undergraduate enrollment}}$$

Sources: Same as for GIFTAID.

$$\text{PCNEEDY} = \frac{\text{Number of undergraduates expected to have applied and qualified for need-based financial aid—1974–75}}{\text{Fall 1974—Full-time undergraduate enrollment}}$$

$$\text{GRADS} = \frac{\text{Full-time graduate students—Fall 1974}}{\text{Total full-time enrollment—Fall 1974}}$$

Source: *Postsecondary Educational Needs in Michigan*, pp. 29, 30, 32.

Table A.5

ANALYSIS OF EFFECT OF VARIABLES ON BORROWING RATES AT MICHIGAN COMMUNITY COLLEGES, 1974–75

Variable	Partial Correlation Coefficient *(R)*	Regression Coefficient	Standard Error	*t*-Statistic	Significance Level	Partial R^2
Constant	. . .	−5.437	24.027	−.226	.823	
GIFTAID	−.144	−.083	.119	−.699	.491	.021
SOFTLOANS	−.186	−.261	.287	−.910	.372	.034
PCNEEDY	.240	95.391	80.344	1.187	.247	.058
GSLRATIO	.498	37.388	13.575	2.754	.011	.248
DEFAULTS	−.049	−19.757	83.599	−.236	.815	.002

Least Squares Regression Analysis of Variance of Borrowing Rate = Loans Per Thousand Students N = 29 out of 29

Source	Degrees of Freedom	Sum of Squares	Mean Square	*F*-Statistic	Significance
Regression	5	23502.	4700.4	2.962	.033
Error	23	36499.	1586.9		
Total	28	60001.			

Multiple *R* = .62586 *R*-Square = .39170 Standard Error = 39.836

Note: For definitions of variables see Chapter IV of text.
Sources: See Appendix Table A.4.

Table A.6

ANALYSIS OF EFFECT OF VARIABLES ON BORROWING RATES AT PUBLIC FOUR-YEAR AND PRIVATE COLLEGES AND UNIVERSITIES, 1974–75

Variable	Partial Correlation Coefficient *(R)*	Regression Coefficient	Standard Error	*t*-Statistic	Significance Level	Partial R^2
Constant	. . .	20.77	20.36	1.020	.313	
Private	−.189	−19.62	15.23	−1.288	.204	.036
GIFTAID	.390	.07	.02	2.844	.007	.152
SOFTLOANS	−.037	−.02	.07	−.246	.807	.001
PCNEEDY	−.104	−.47	.67	−.704	.484	.011
GSLRATIO	.463	32.28	9.22	3.501	.001	.214
DEFAULTS	−.230	−202.17	127.58	−1.584	.120	.053

Least Squares Regression Analysis of Variance of Borrowing Rate = Loans per Thousand Students N = 52 out of 53

Source	Degrees of Freedom	Sum of Squares	Mean Square	*F*-Statistic	Significance
Regression	6	41105.	6850.9	4.0947	.0023
Error	45	75291.	1673.1		
Total	51	.11640 +6			

Multiple R = .59426 R-Square = .35315 Standard Error = 40.904

Note: For definitions of variables see Chapter IV of text.
Sources: See Appendix Table A.4.

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